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Amy J. Martin
Date of Signature 8-17-01

PATENT

#4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Mount et al.

Serial No.: 09/835,976

Group Art Unit: Not Assigned

Filed: April 16, 2001

Docket No.: 1242/26/2

Confirmation No.: Not Assigned

For: PURIFIED AND ISOLATED POTASSIUM-CHLORIDE COTRANSPORTER
NUCLEIC ACIDS AND POLYPEPTIDES AND THERAPEUTIC AND
SCREENING METHODS USING SAME

Commissioner for Patents
Washington, D. C. 20231
Attention: Official Draftsman

TRANSMITTAL OF FORMAL DRAWINGS

Dear Sir:

Please find enclosed a new set of formal drawings (42 sheets) for filing in the
above-identified U.S. Patent Application.

Respectfully submitted,

JENKINS & WILSON, P.A.

Date: August 17, 2001

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1242/26/2 AAT/ajm

25297

PATENT TRADEMARK OFFICE

09835976 090402

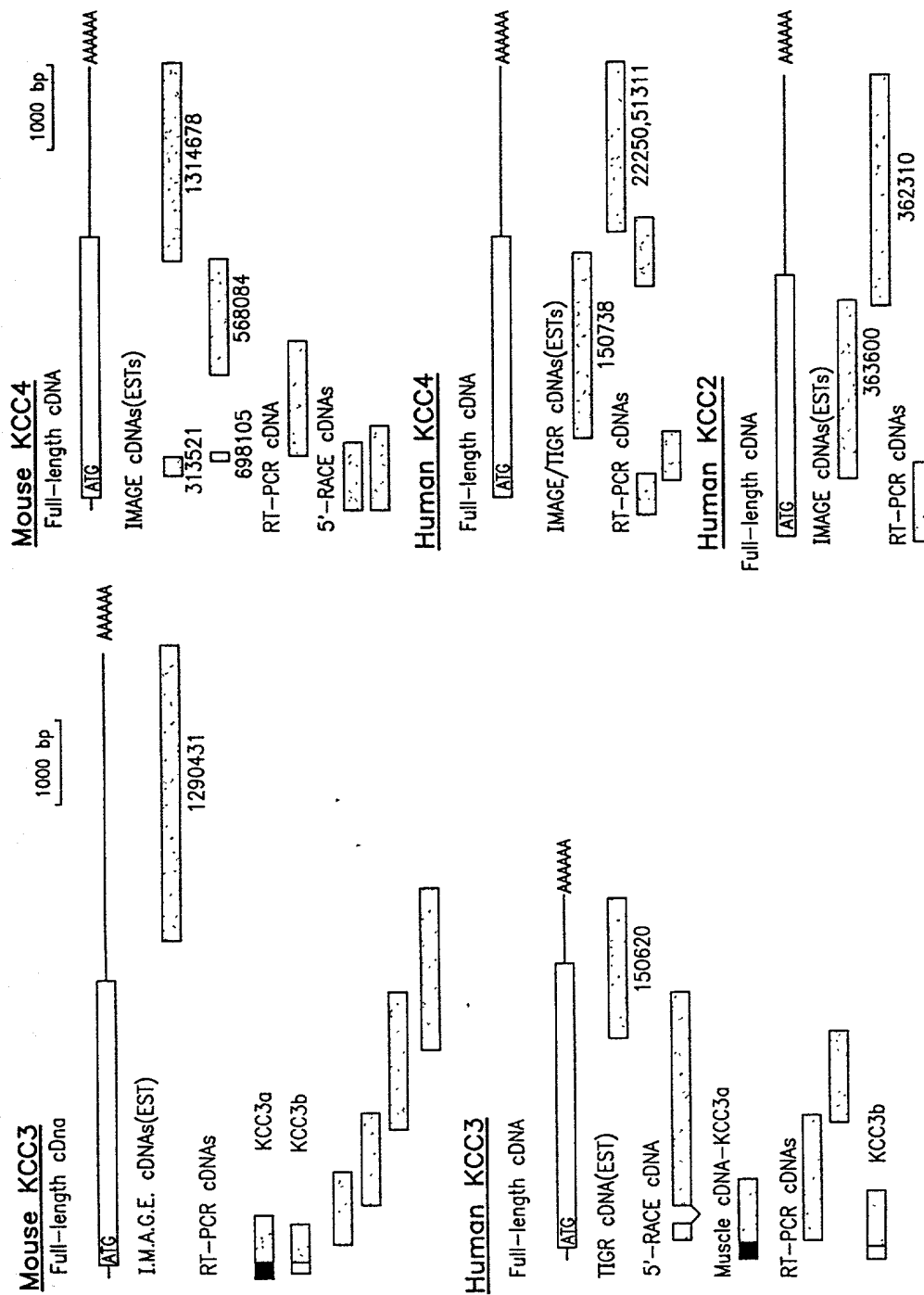


FIG. 1

2010073255860

COPY

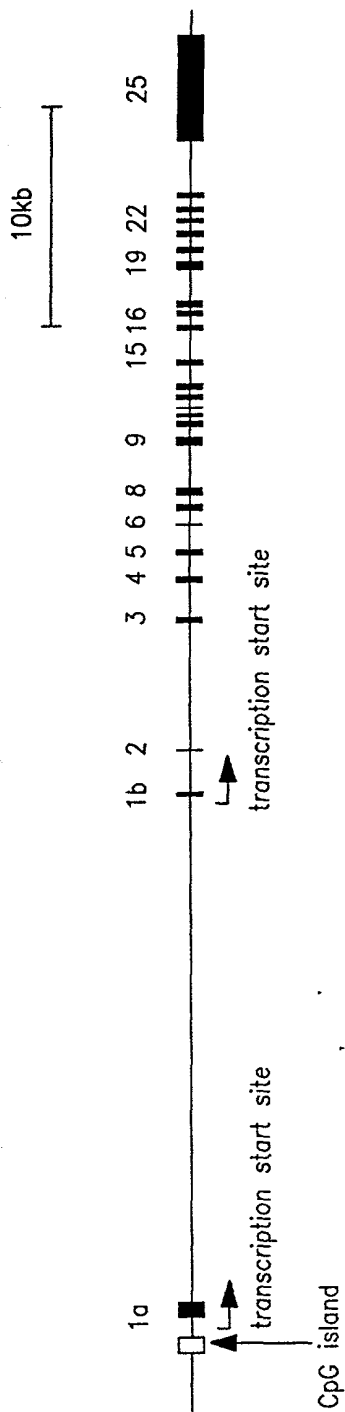


FIG. 2A

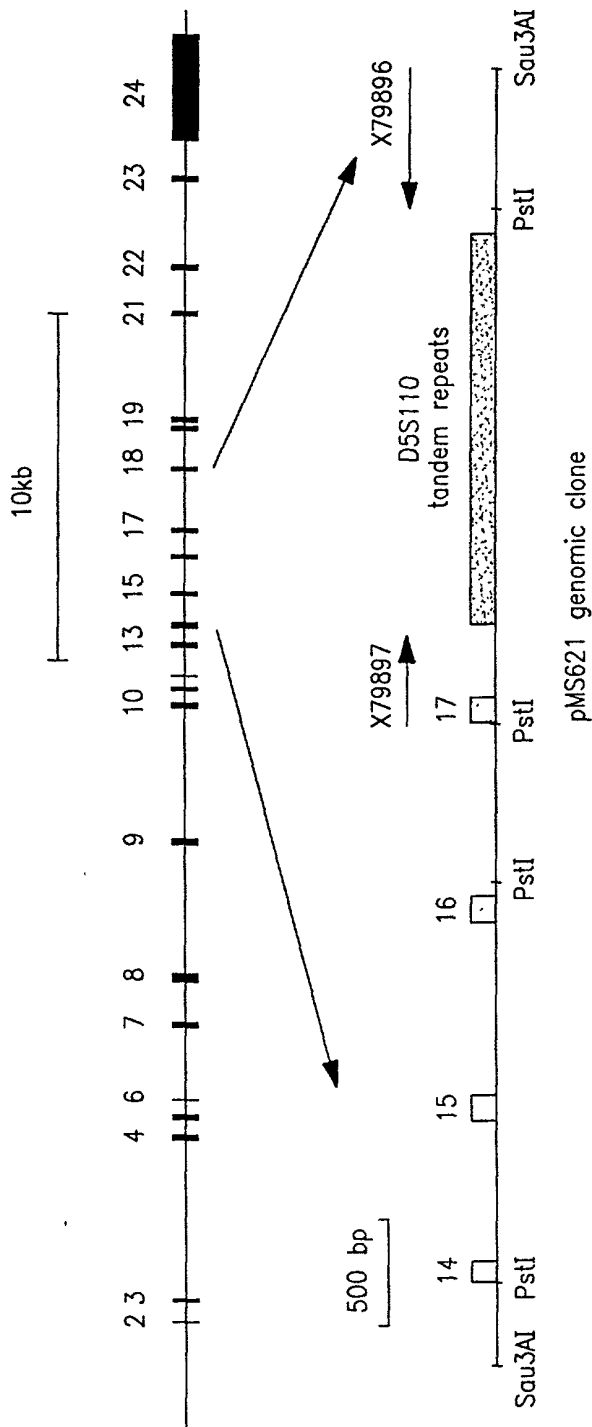


FIG. 2B

COPY

mouse genomic clone

1 kb

5' 3'

sequenced

exon 1

5' UTR

M L N ...cag/gtaagc

5' splice junction

Translation Start Site

XhoI

5' end of cDNA

20 bp

KCC2 sequence
Consensus NRSE

TTCCAGAACCGTGGACAGCGCC
TTCAGCACCCACGGACAGMGSC

** ** *

FIG. 3

COPY

probe dilution	<u>1:1</u>	<u>1:4</u>	<u>1:20</u>	<u>1:100</u>
nuclear proteins	- + - + - + - +			

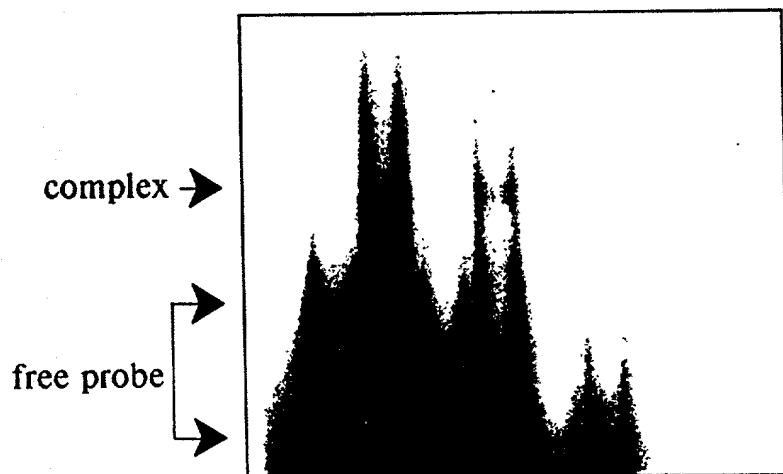


FIG. 4A

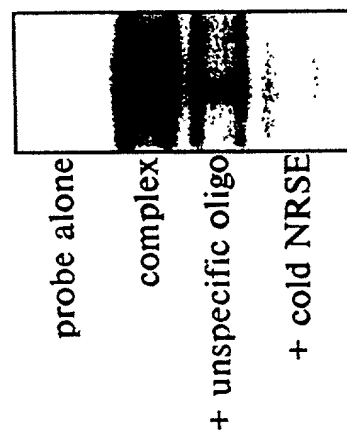


FIG. 4B

COPY

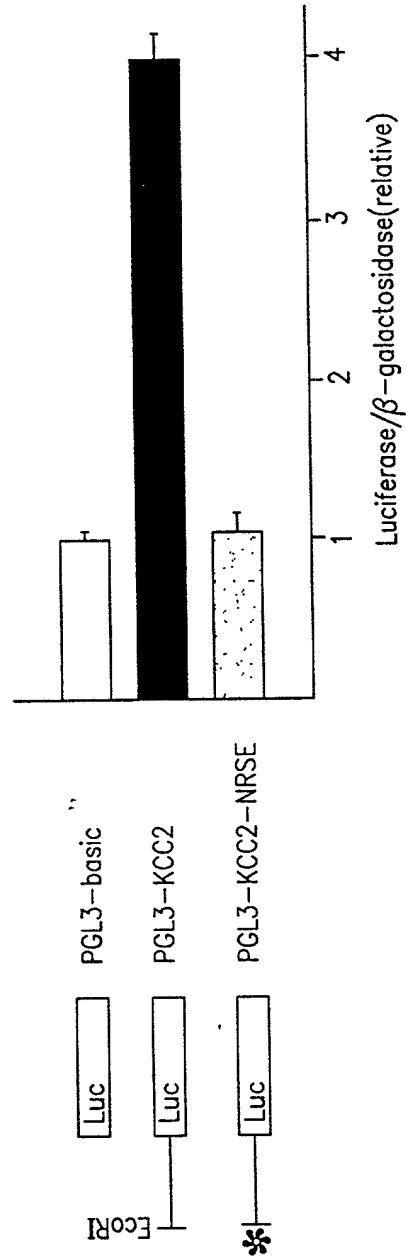


FIG. 5

COPY

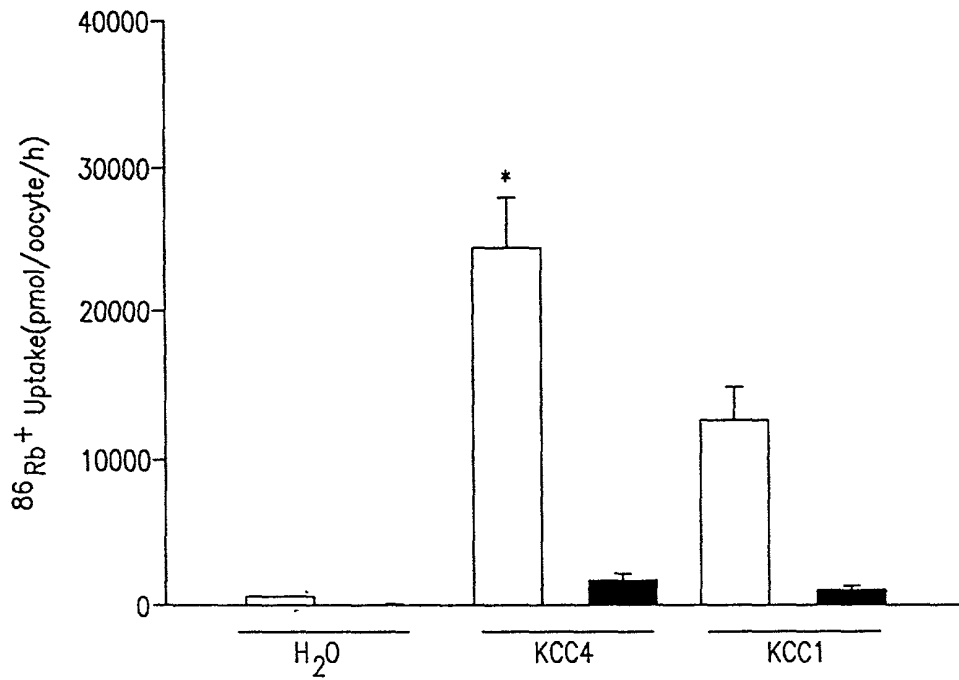
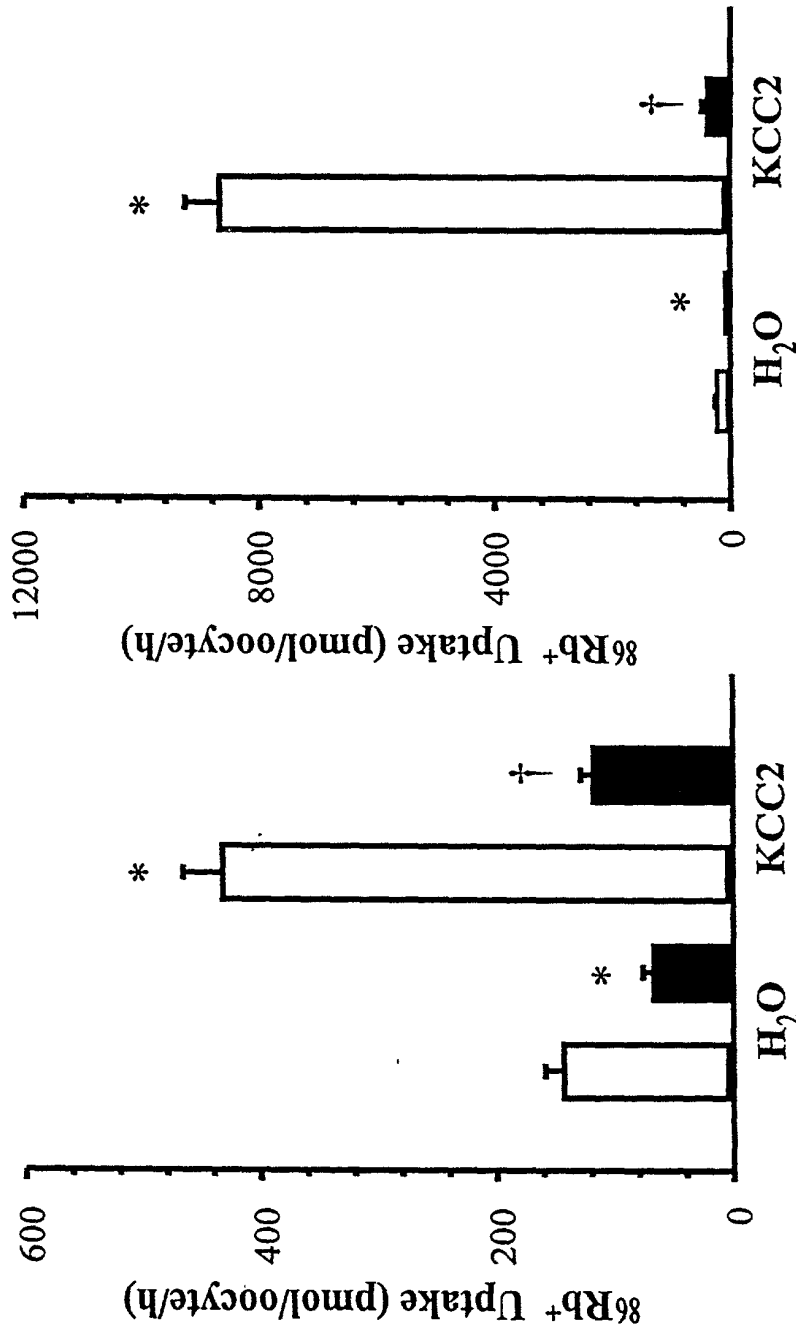


FIG. 6

COPY



COPY

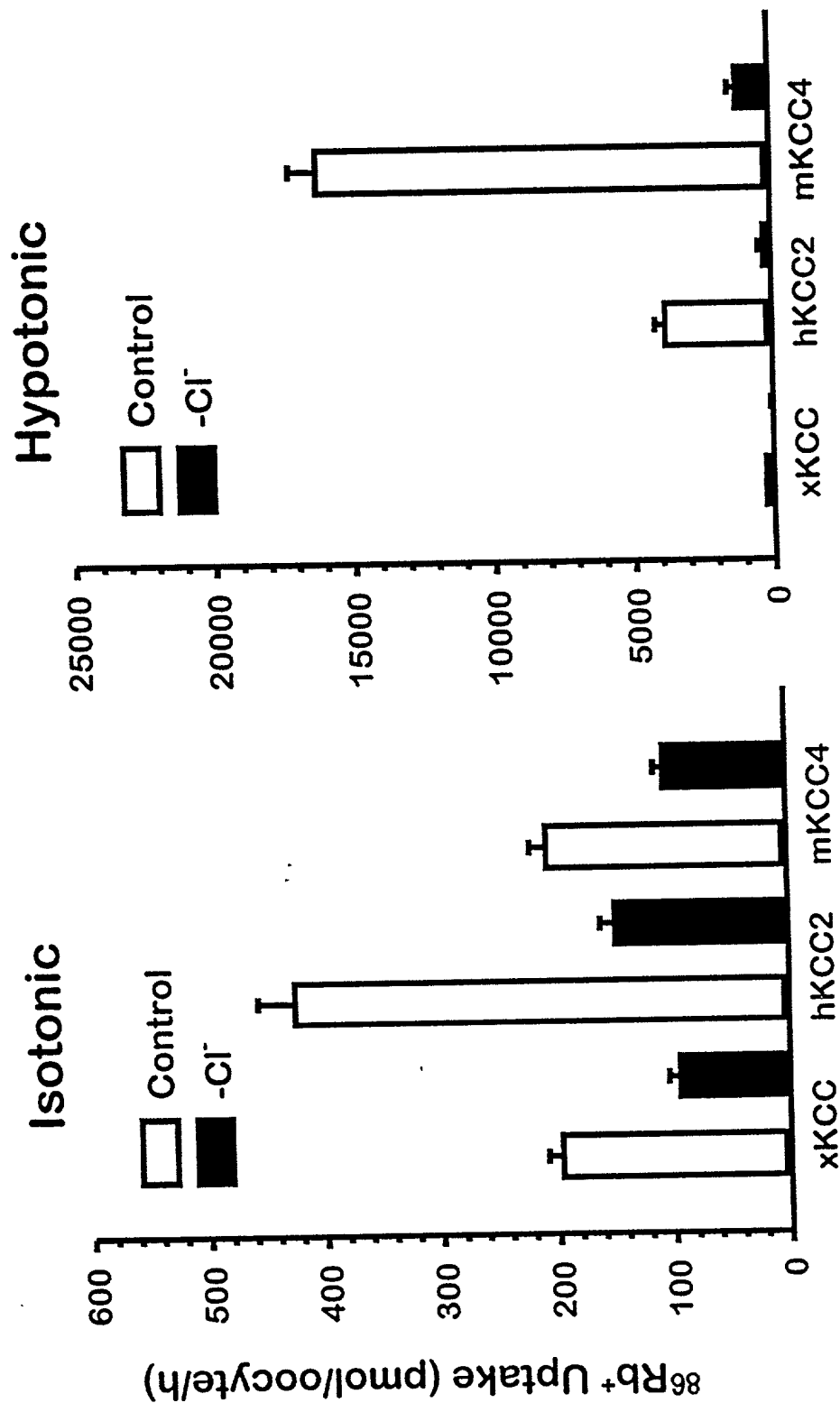


FIG. 8

204020-9465850

COPY

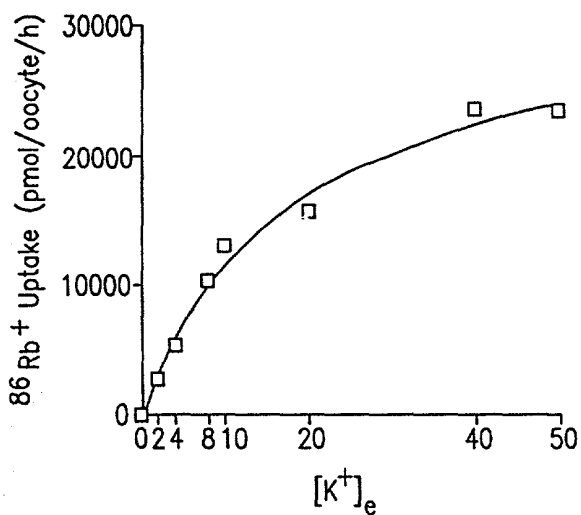


FIG. 9A

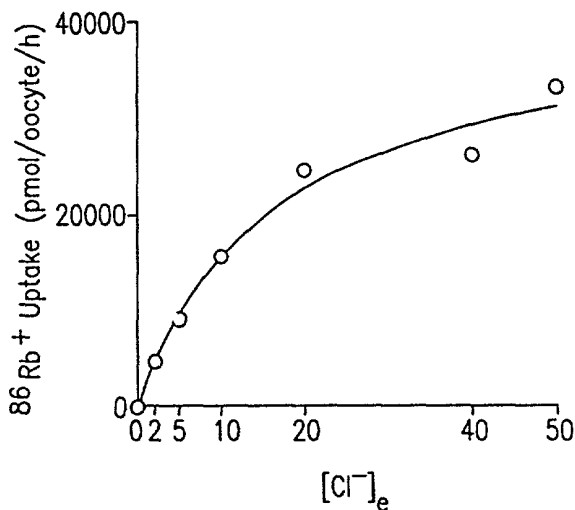


FIG. 9B

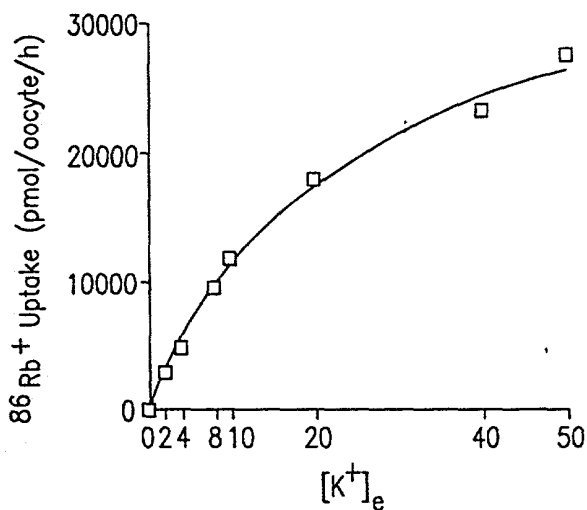


FIG. 9C

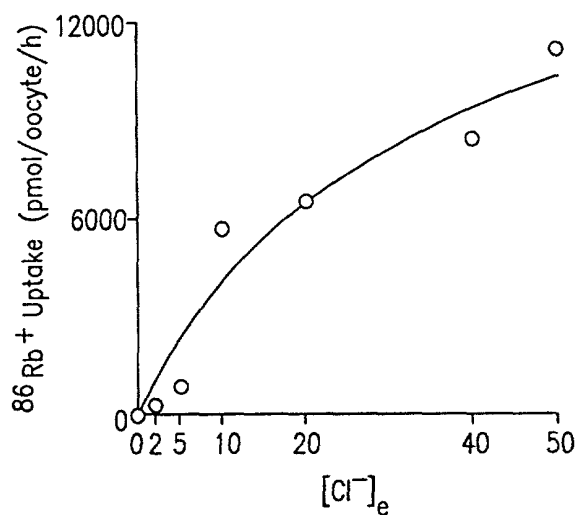


FIG. 9D

204020 9455360

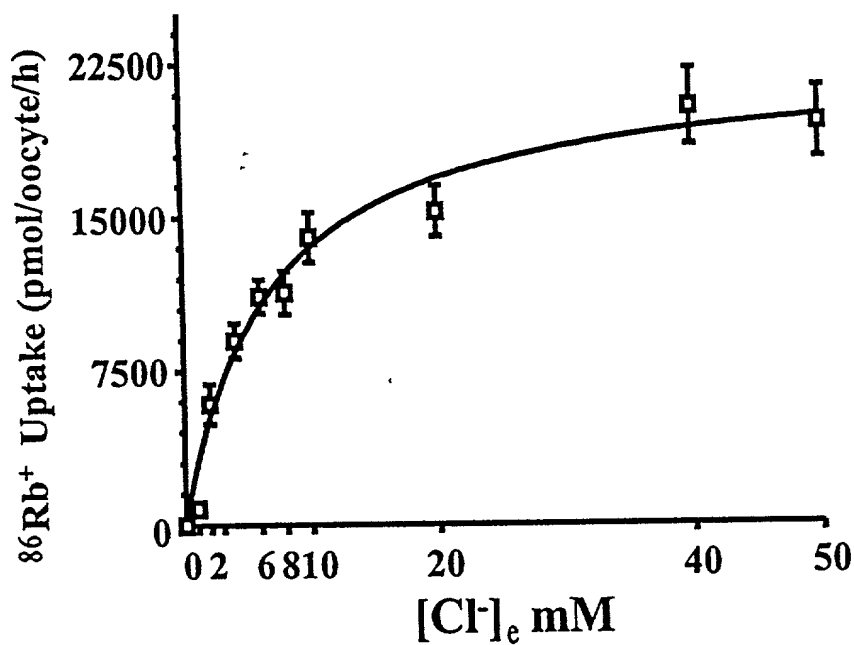
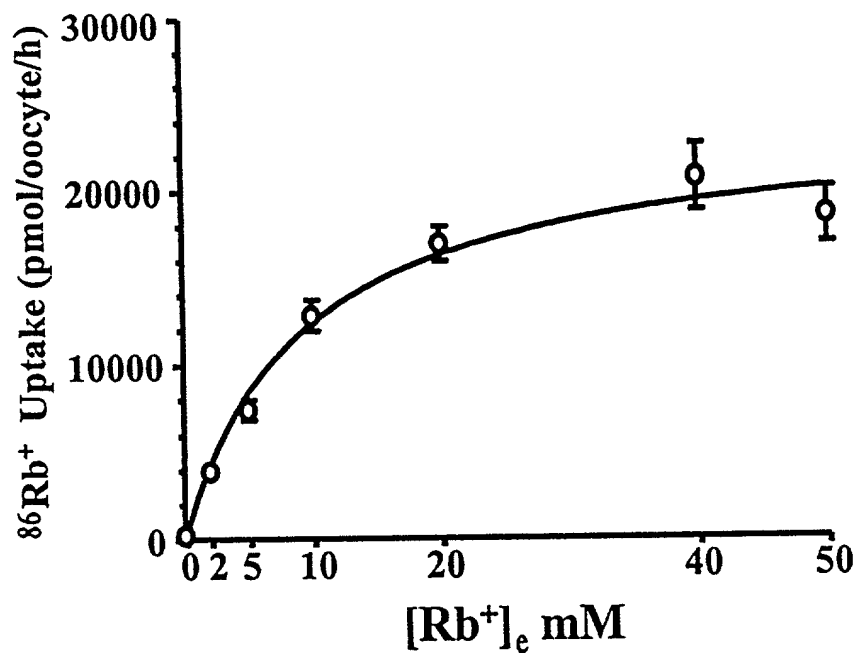
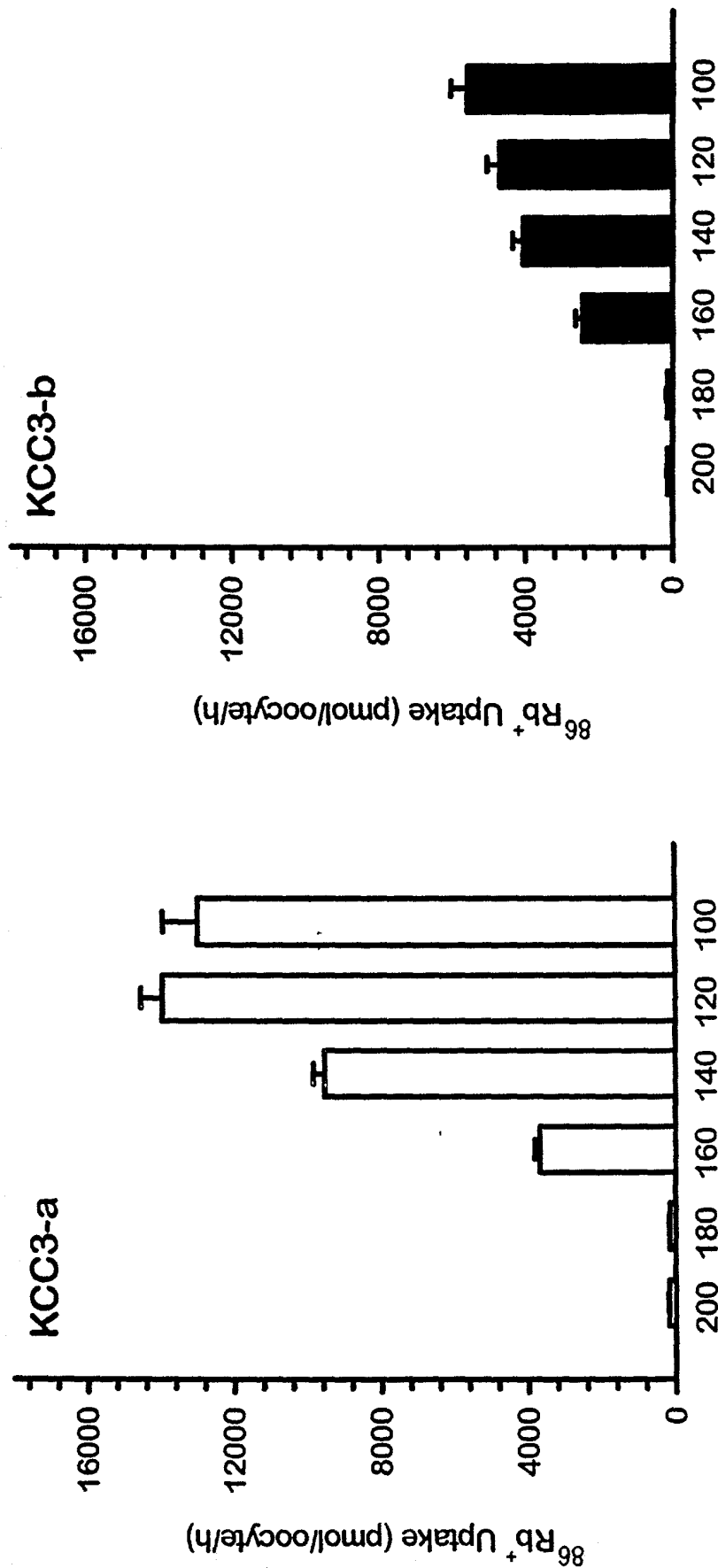


FIG. 10

COPY



Extracellular Osmolarity
(mOsm/Kg)

FIG. 11

COPY

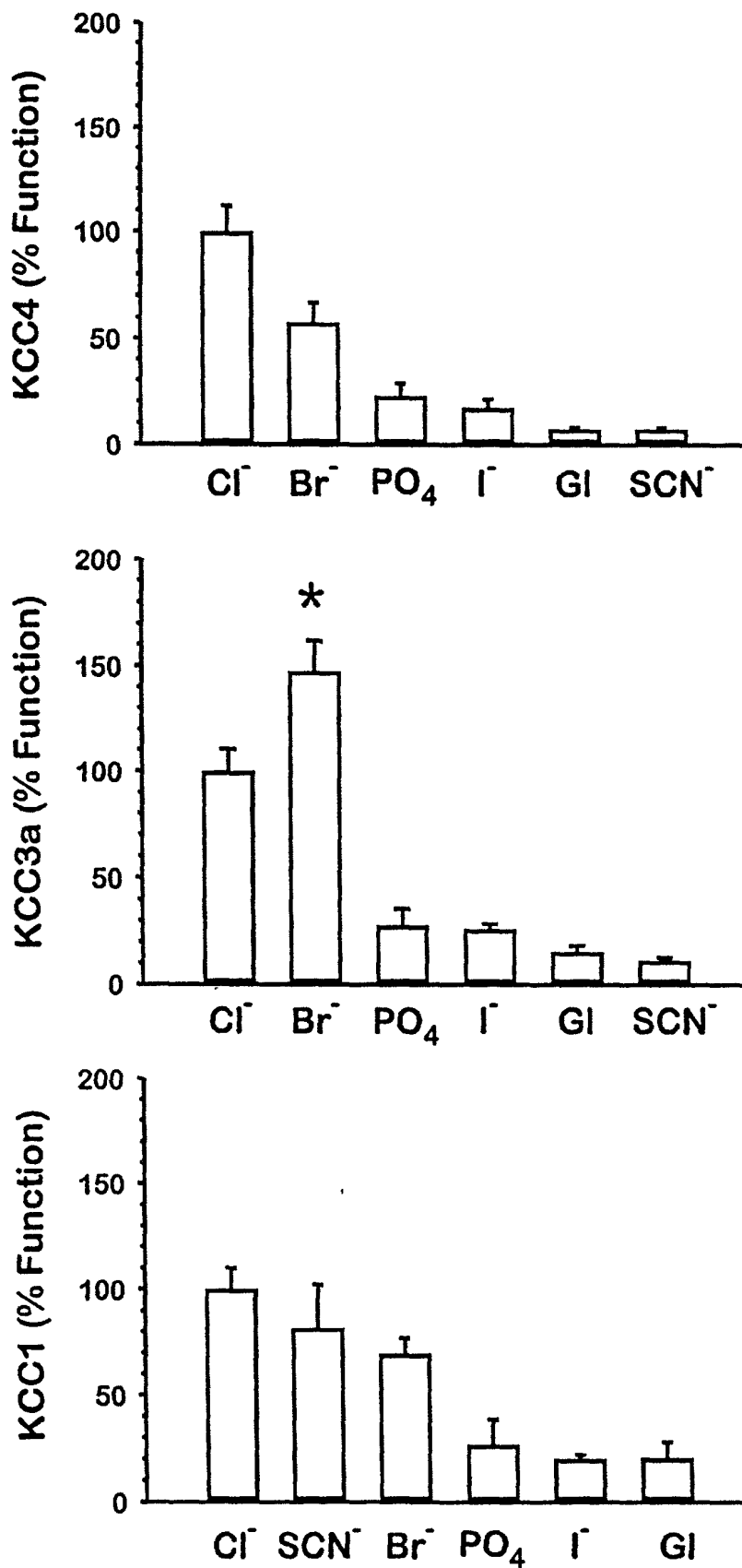


FIG. 12

COPY

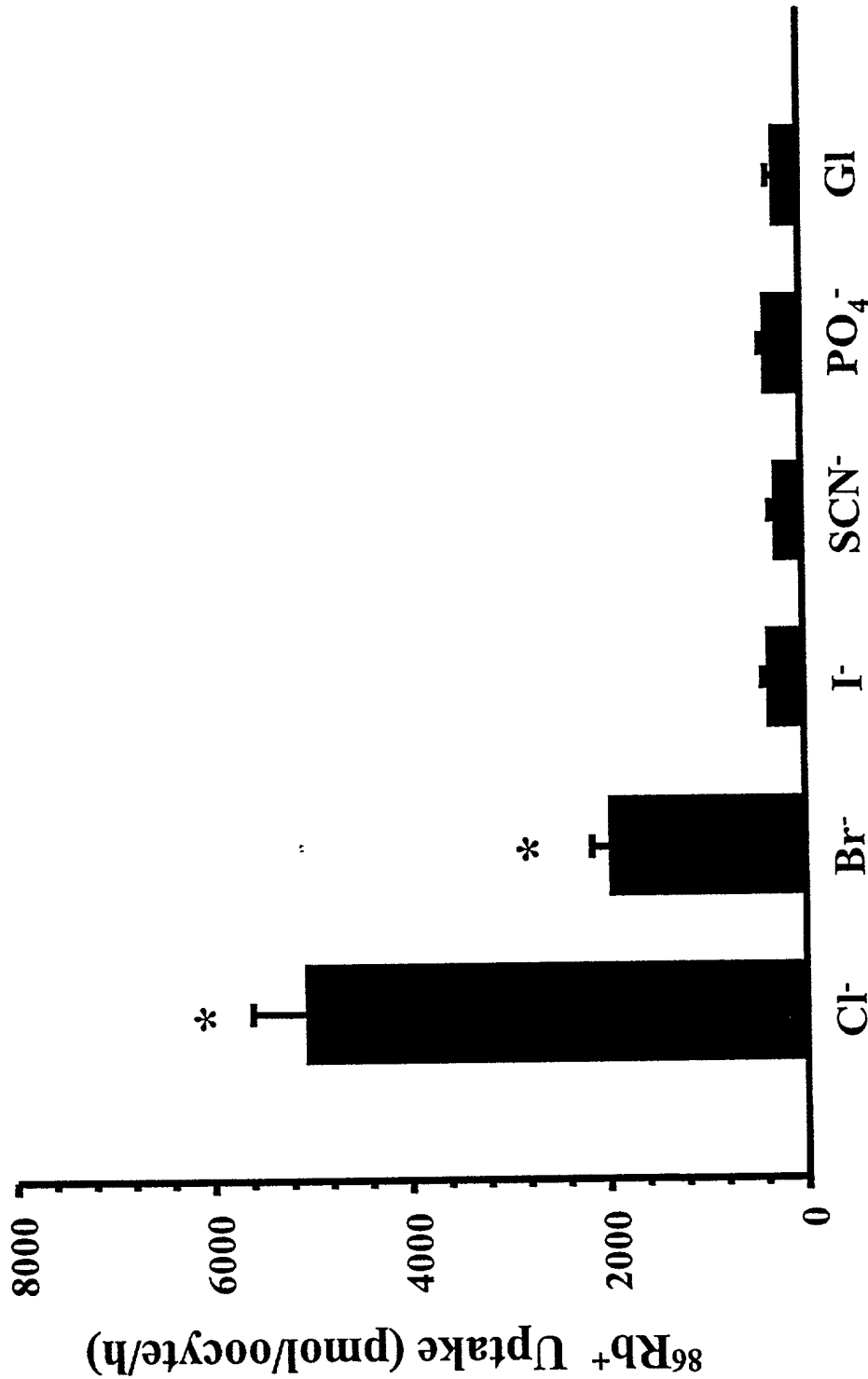


FIG. 13

COPY

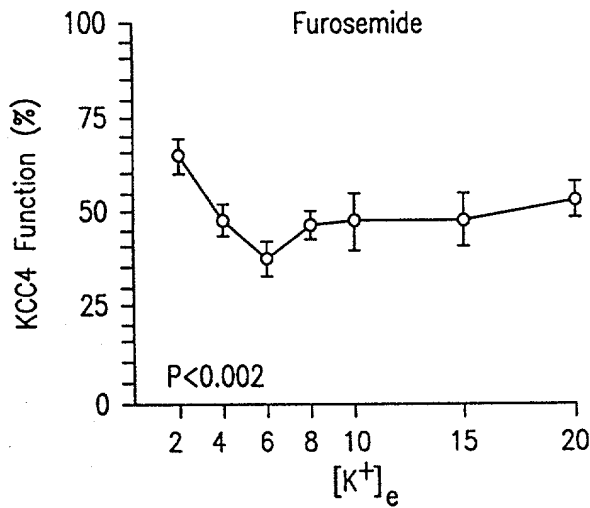


FIG. 14A

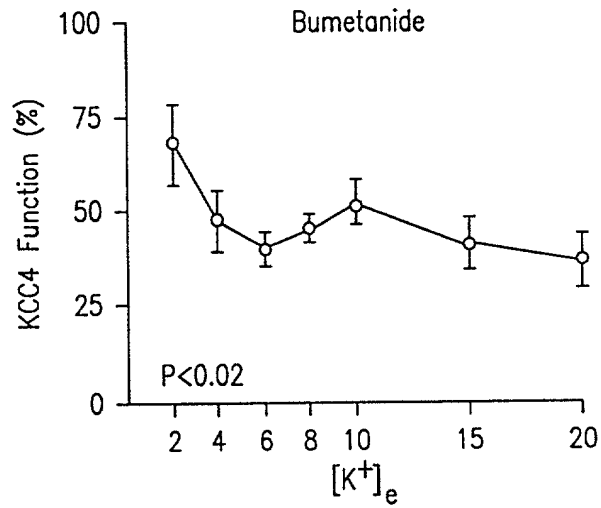


FIG. 14B

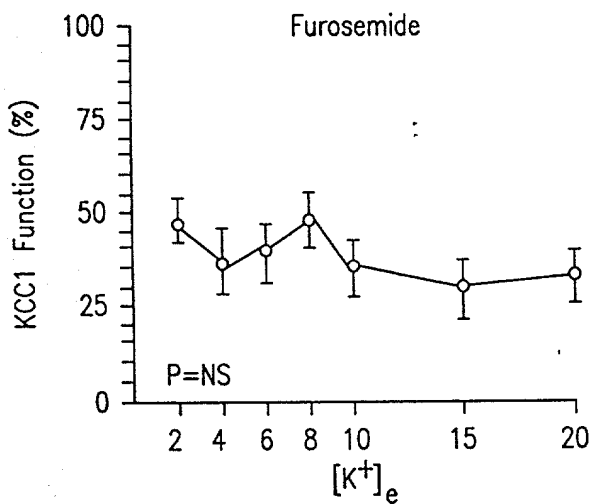


FIG. 14C

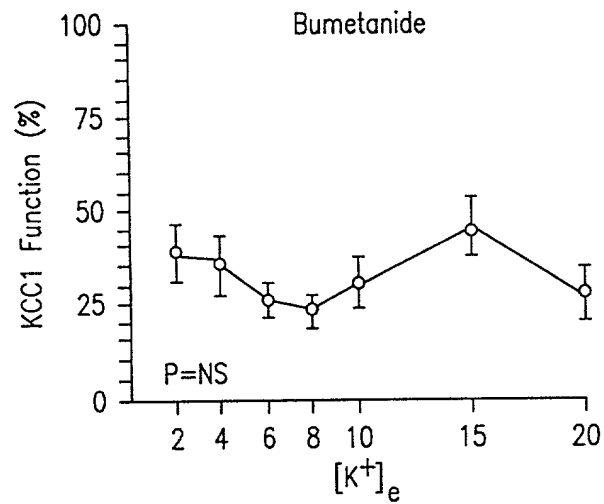


FIG. 14D

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COPY

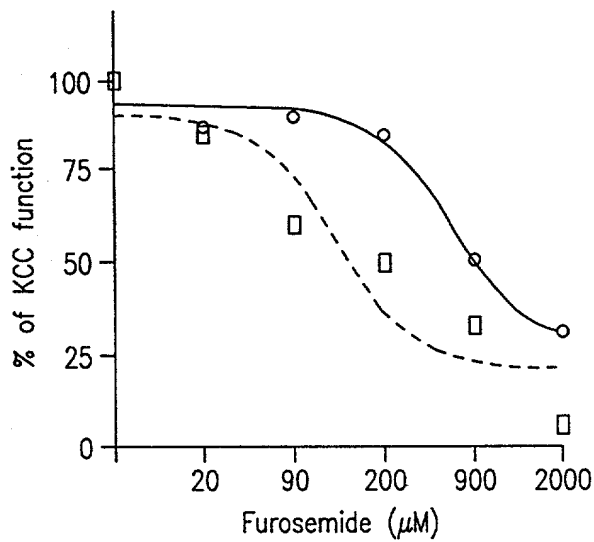


FIG. 15A

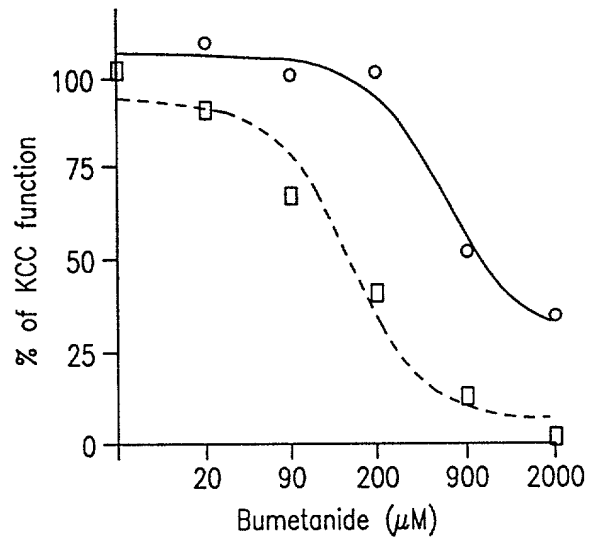


FIG. 15B

COPY

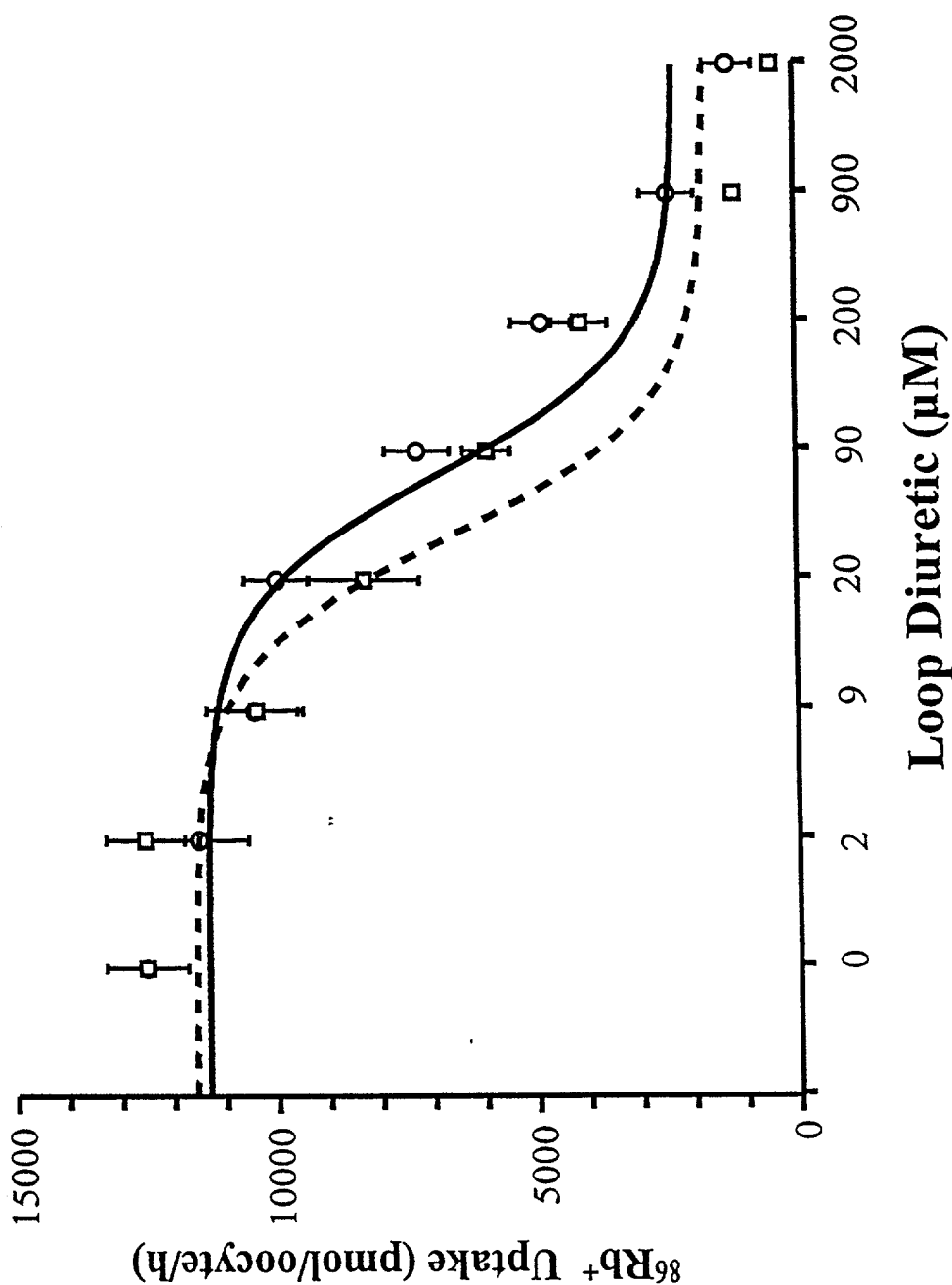
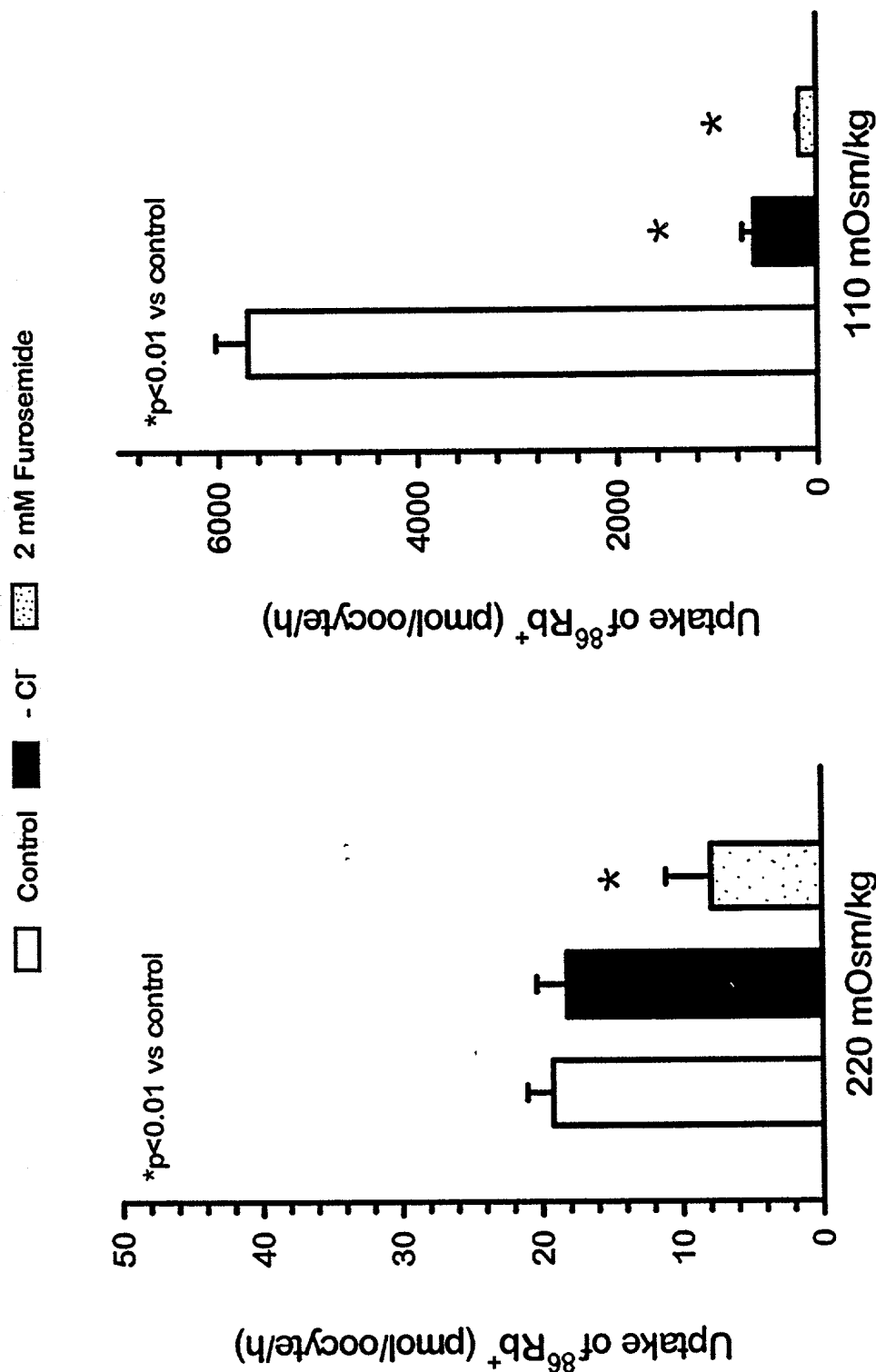


FIG. 16

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COPY



Extracellular Osmolarity

FIG. 17

DIDS (100 μ M)

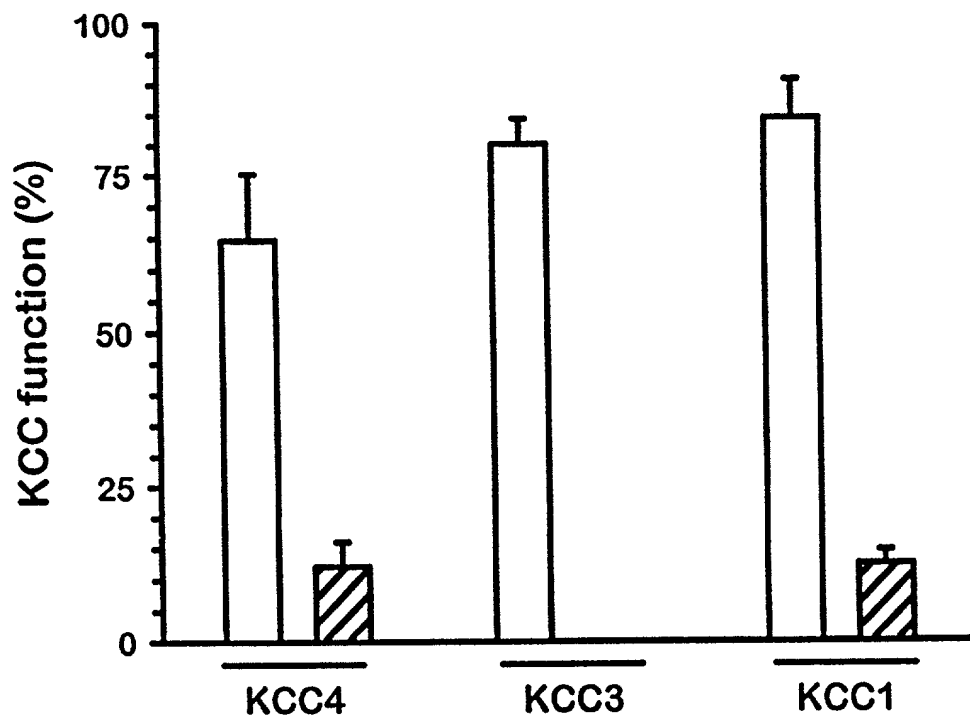


FIG. 18A

DIOA (100 μ M)

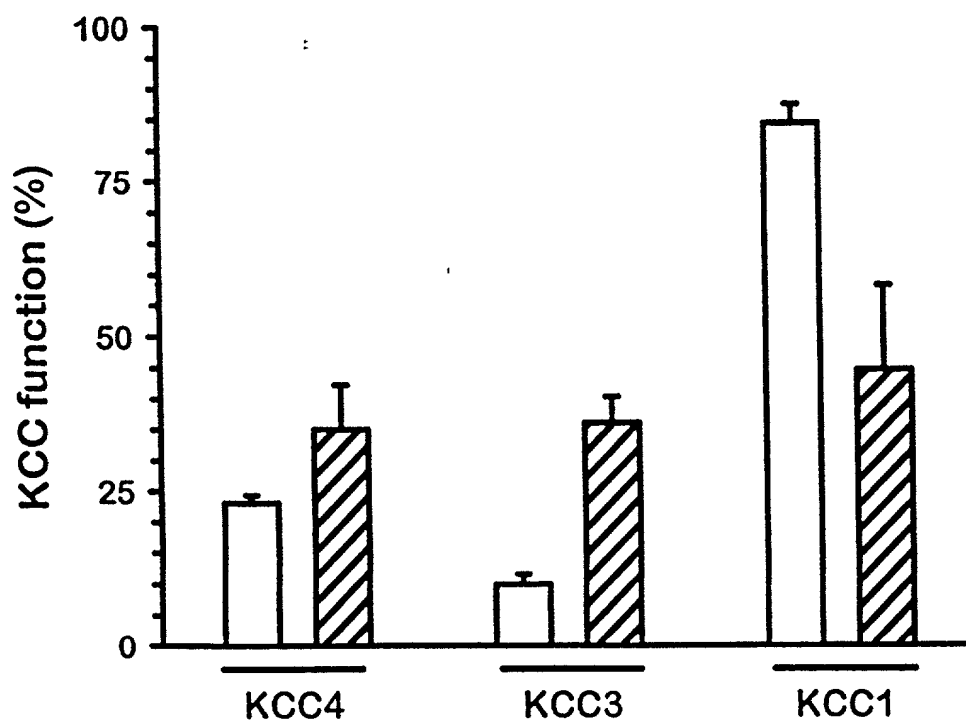


FIG. 18B

2040007-9265860

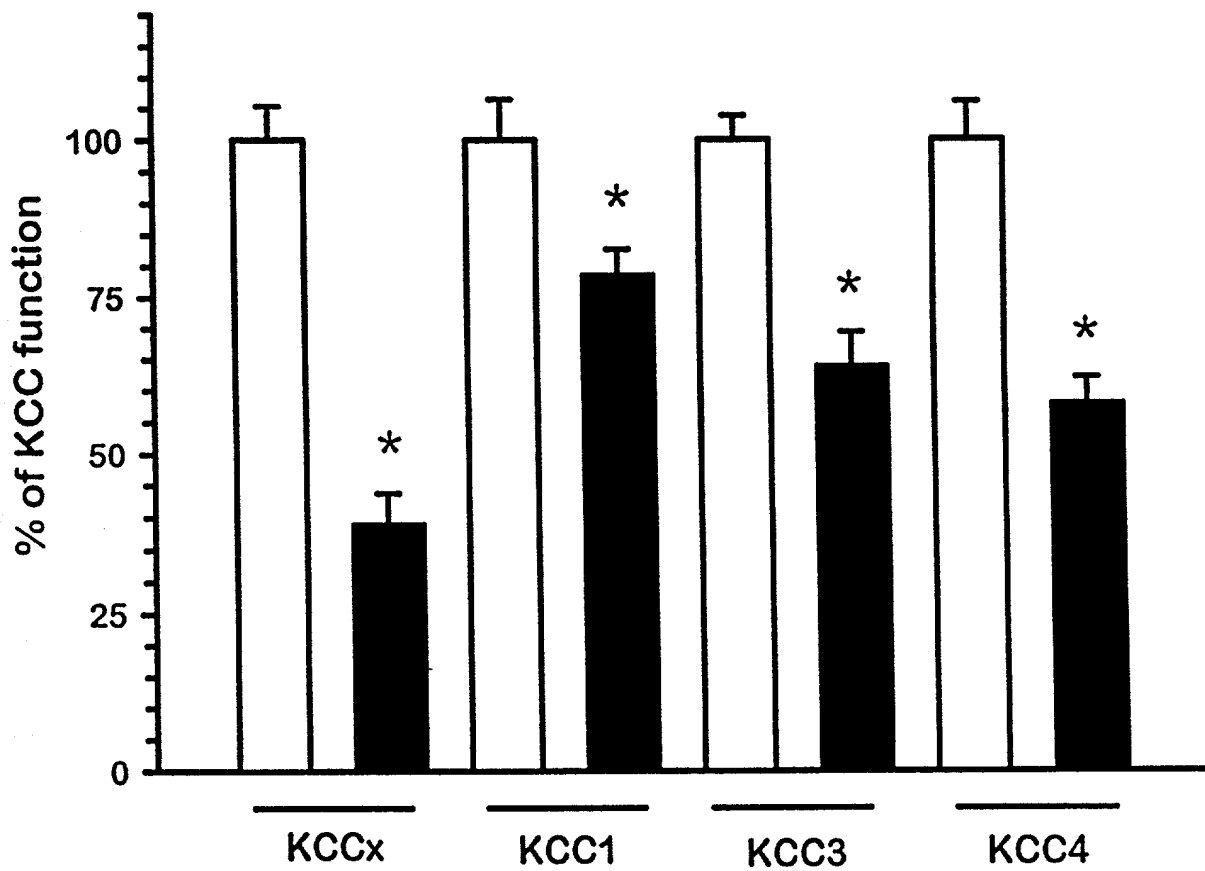
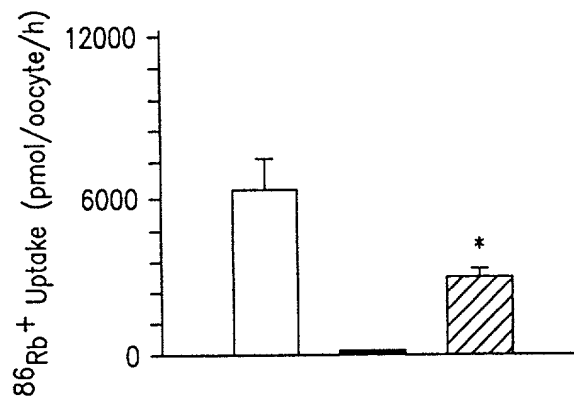
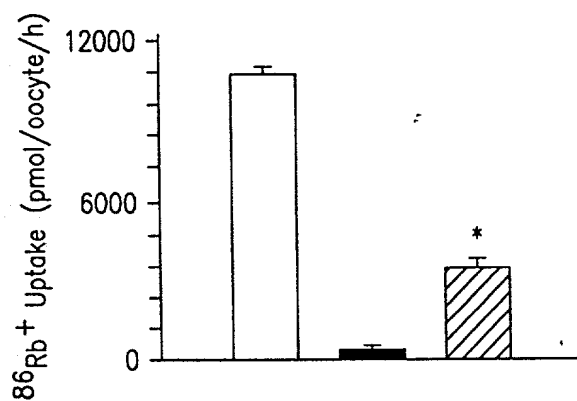
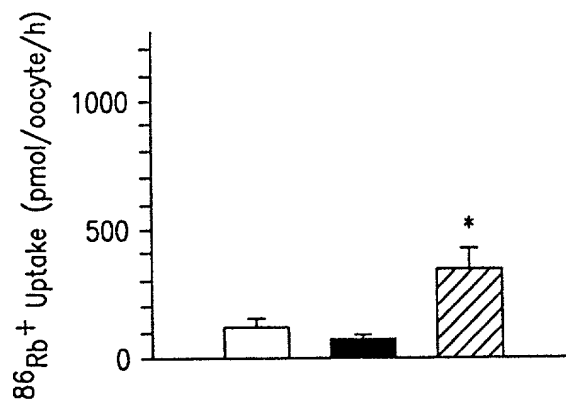
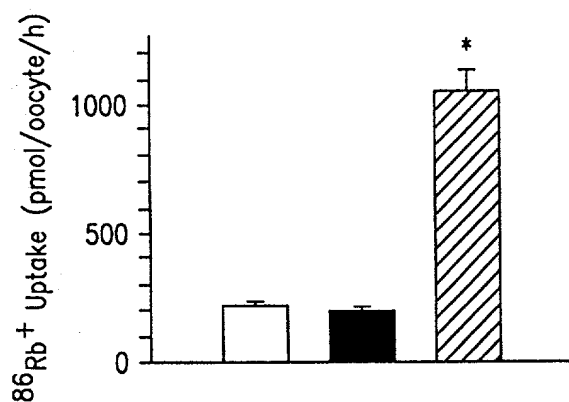


FIG. 19

COPY



COPY

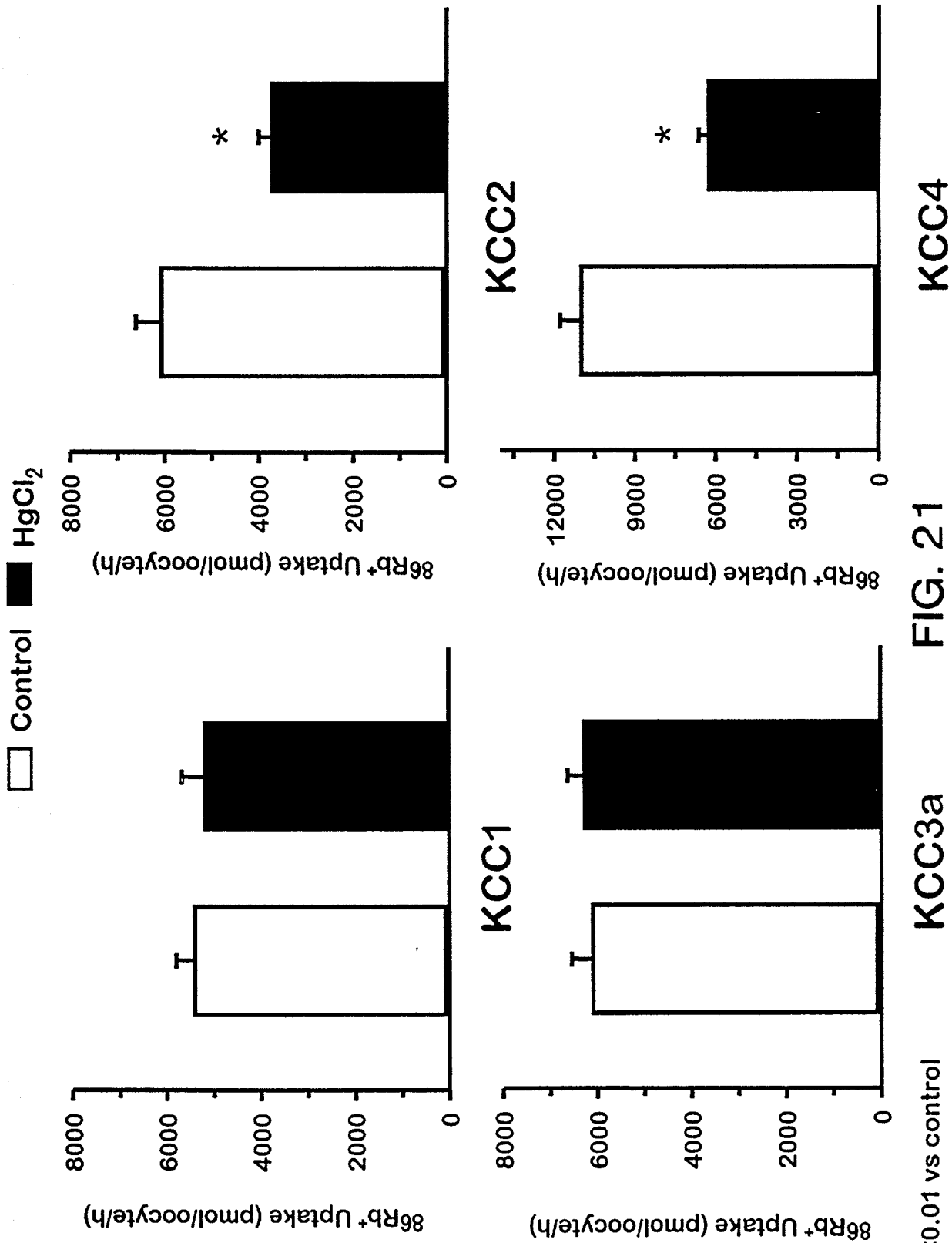


FIG. 21

KCC3a

KCC4

*p<0.01 vs control

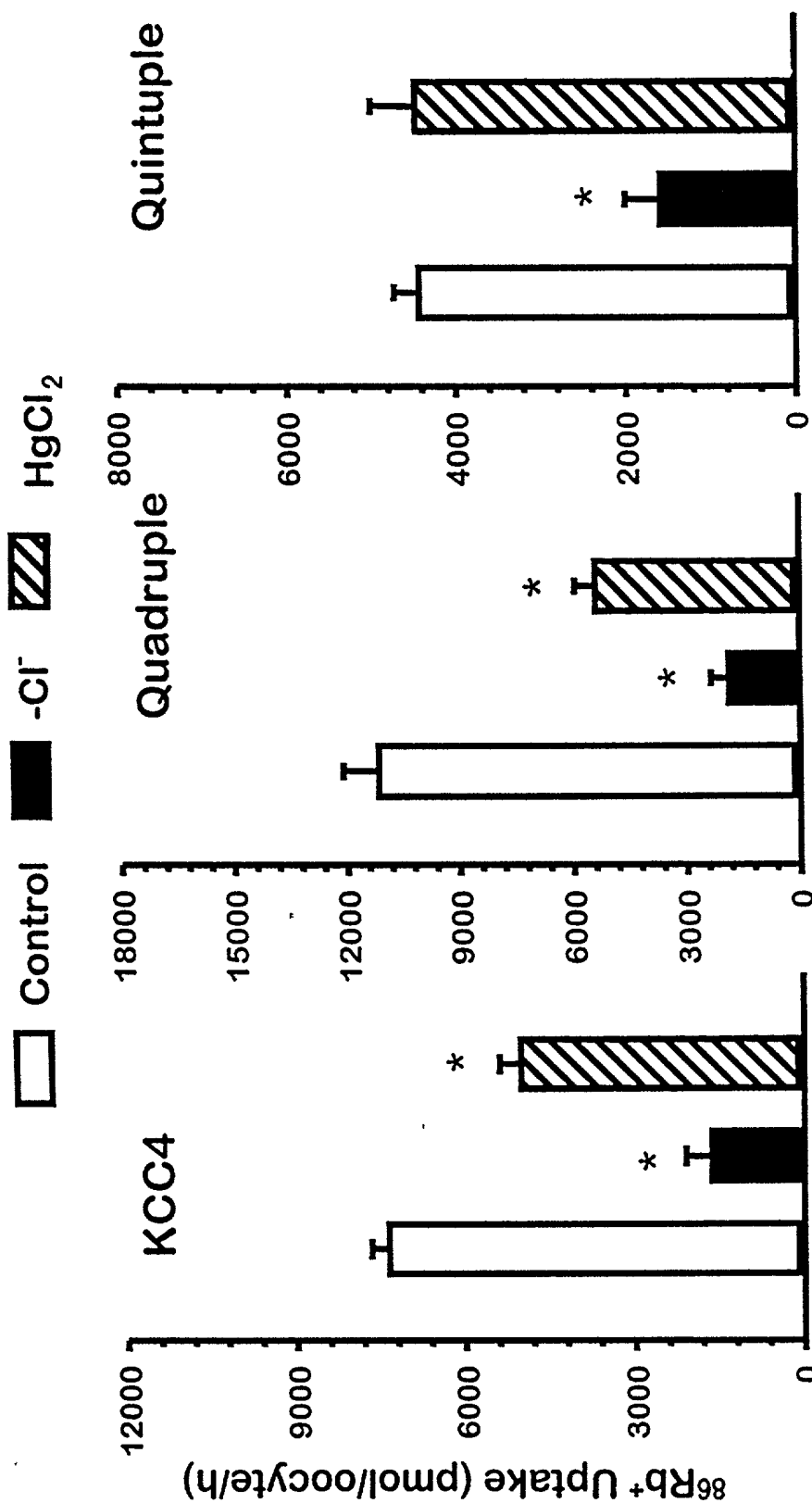


FIG. 22

*p<0.01 vs control

COPY

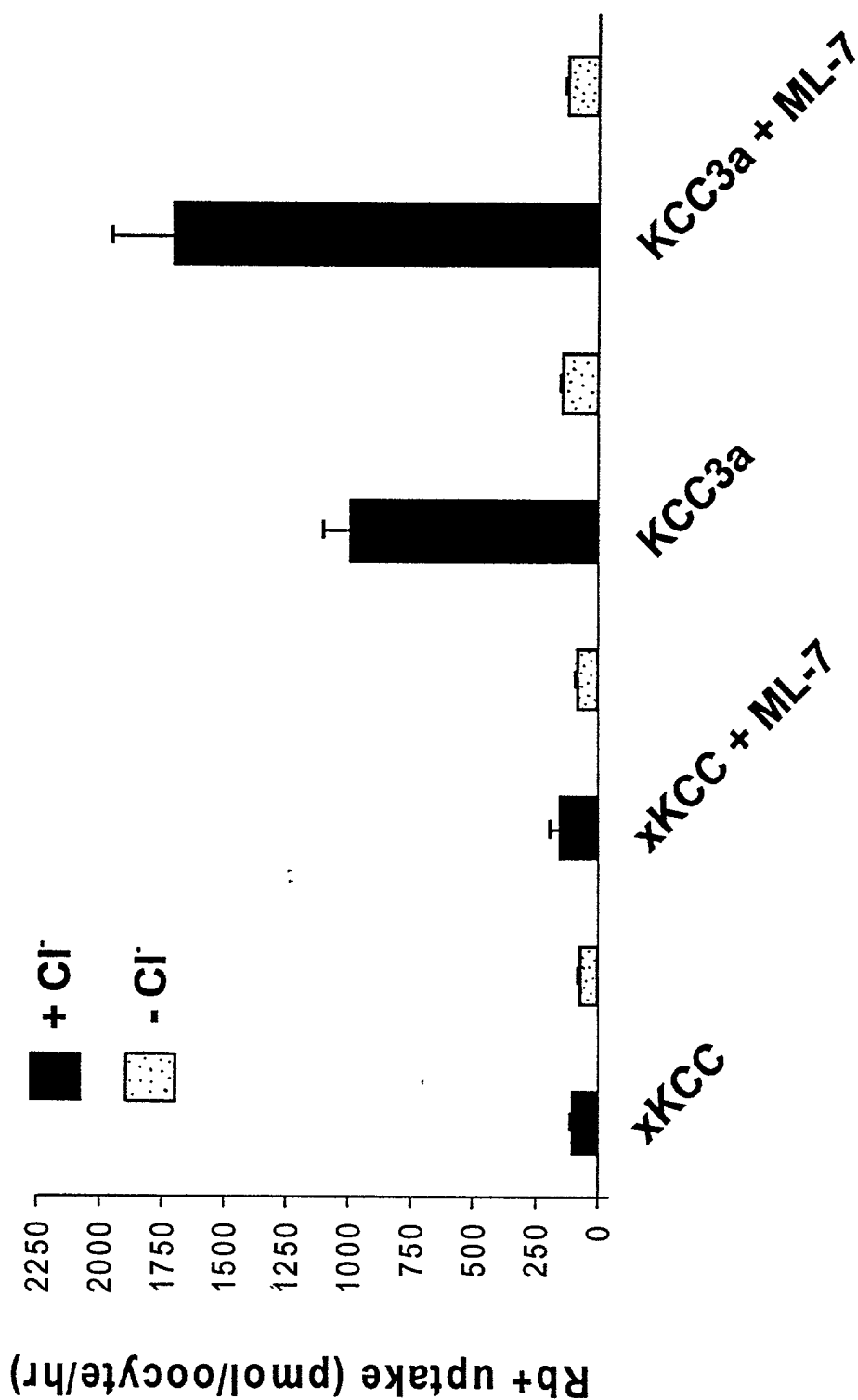


FIG. 23

204760" 9265860

COPY

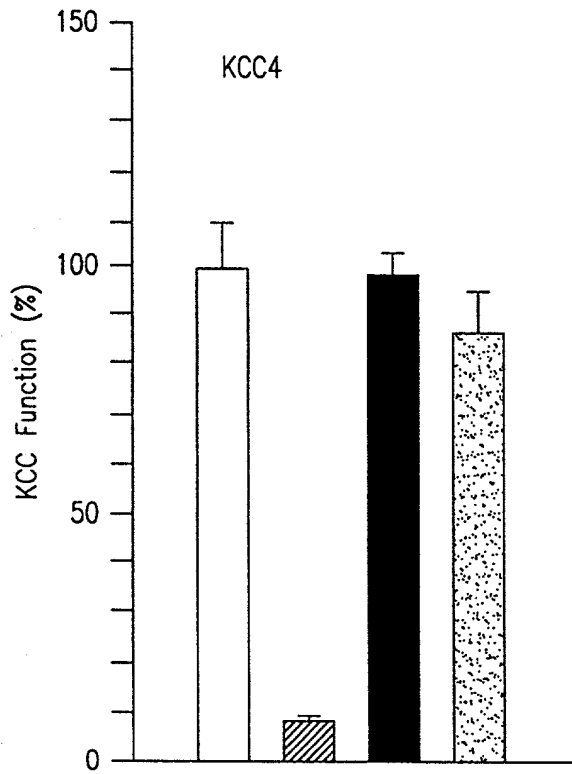


FIG. 24A

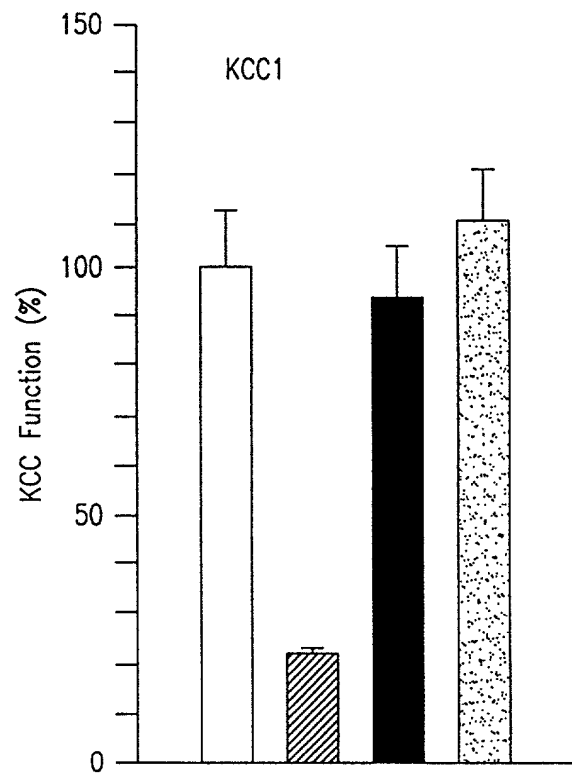
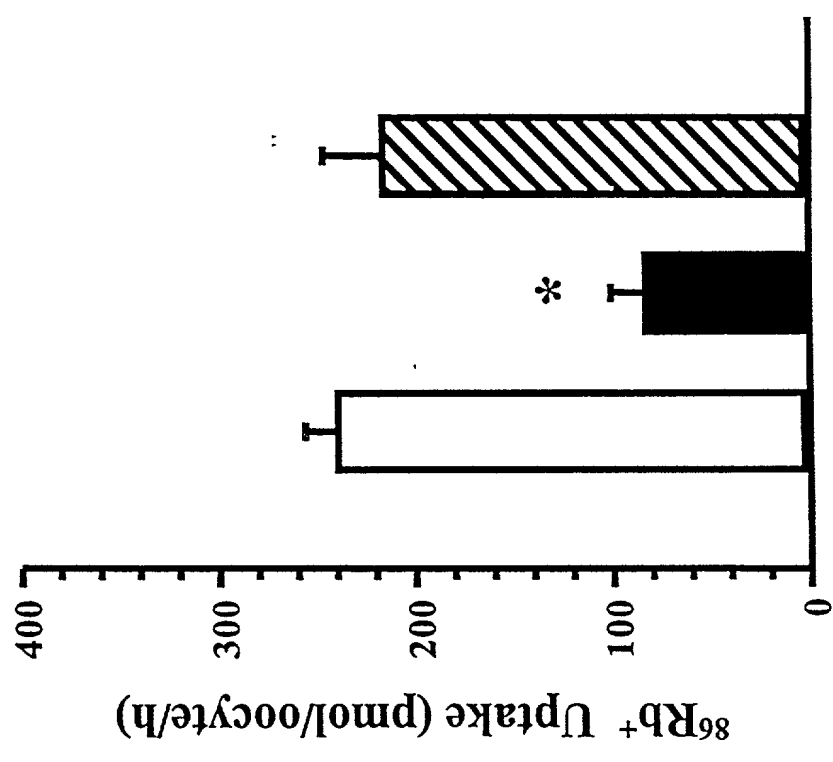
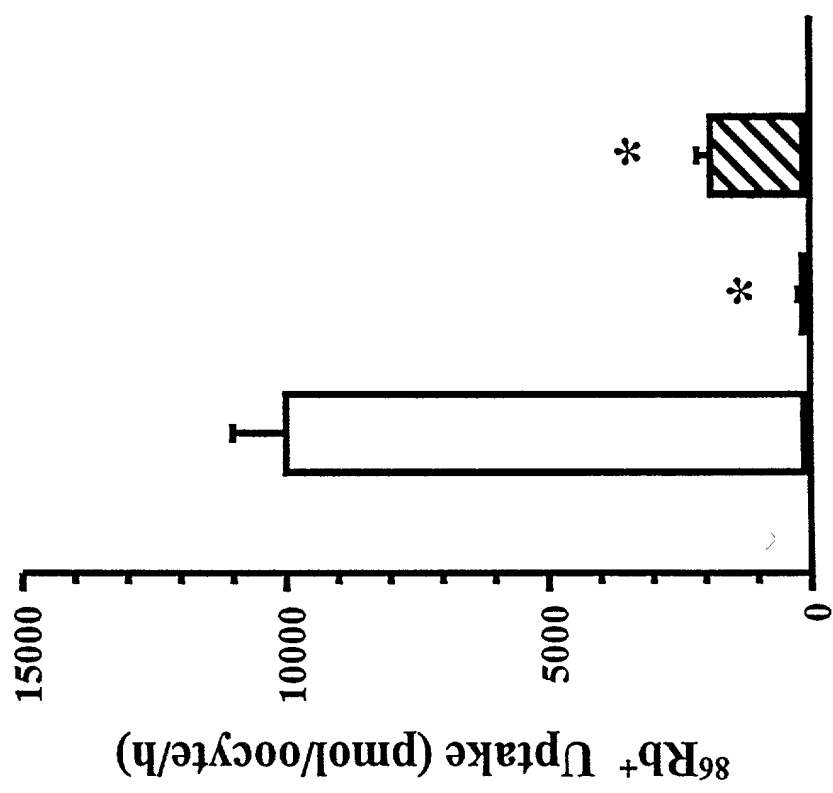


FIG. 24B

COPY



204030 9265E860

COPY

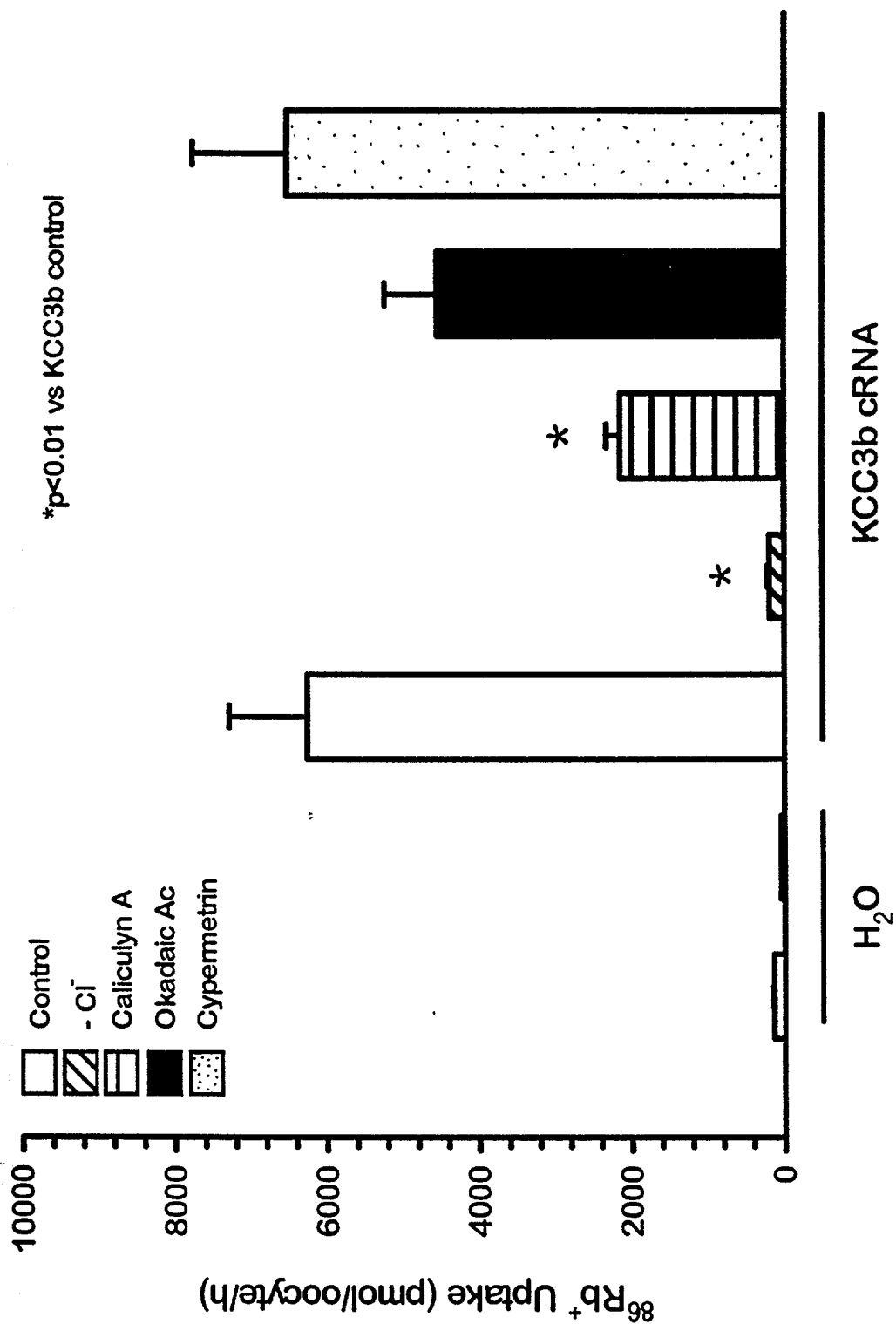


FIG. 26

KCC2/NT2-N

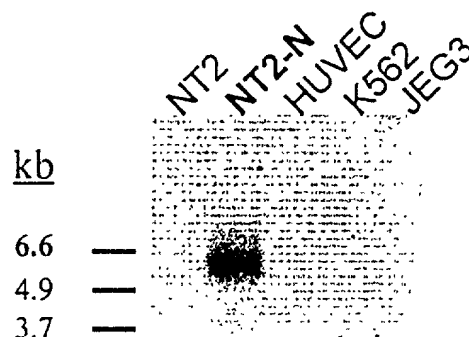


FIG. 27A

Mouse KCC3

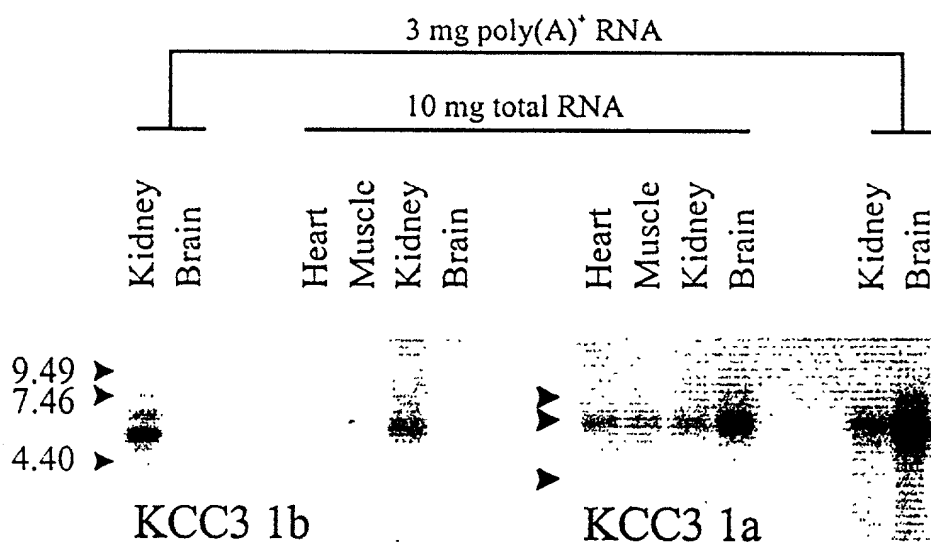


FIG. 27B

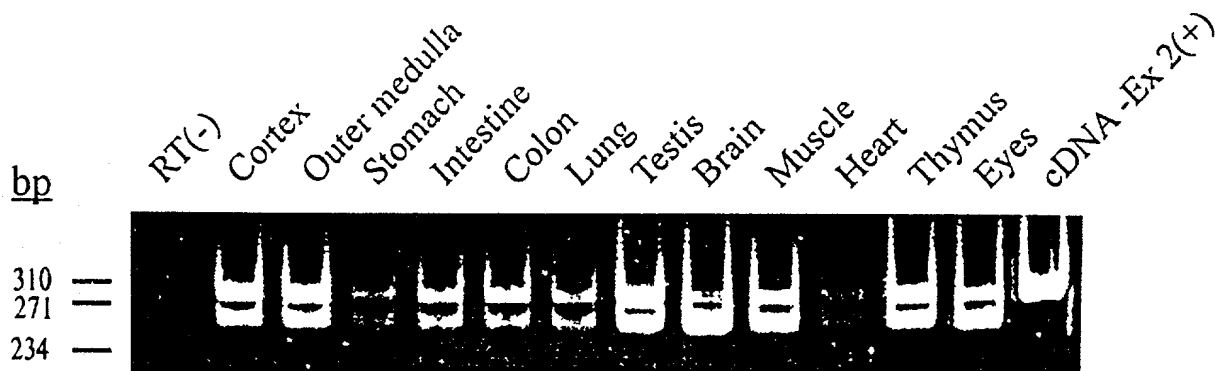


FIG. 27C

COPY

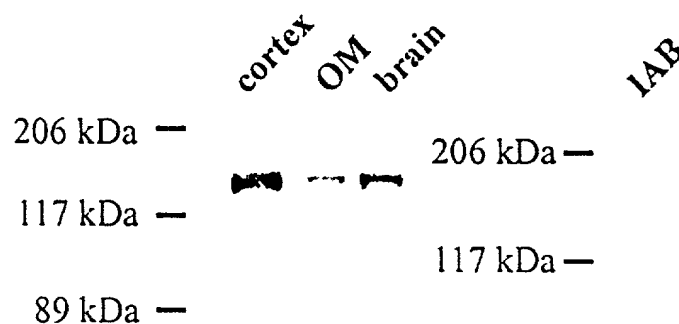


FIG. 27D

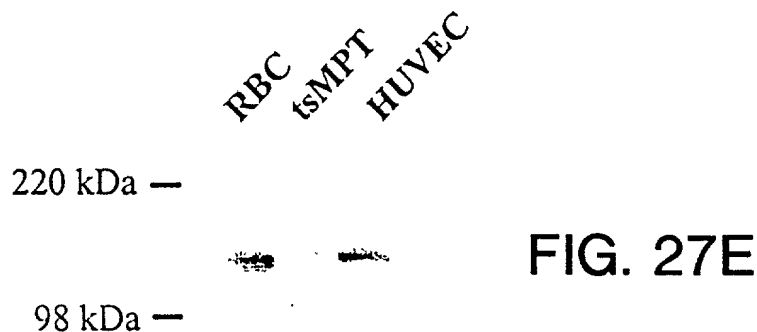


FIG. 27E

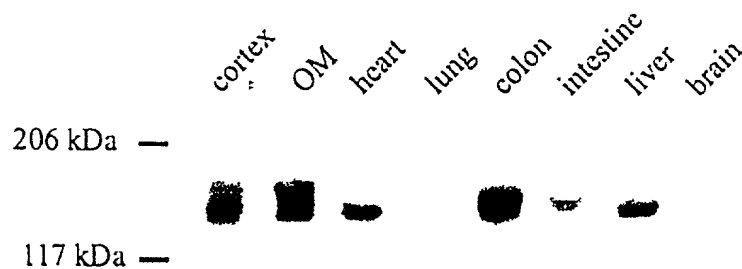


FIG. 27F

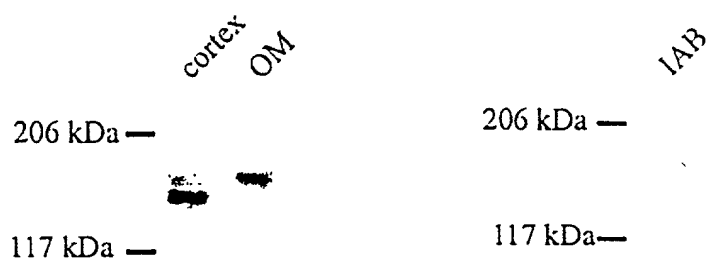


FIG. 27G

FIG. 27H

2040ED" 9/65E860

COPY

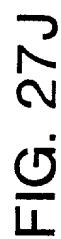
[illegible]

FIG. 27I

COPY

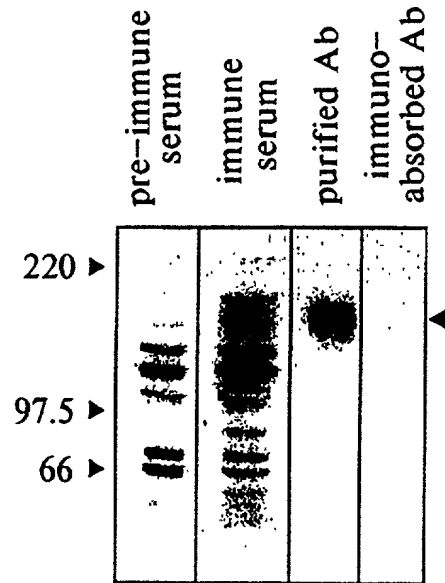


FIG. 28

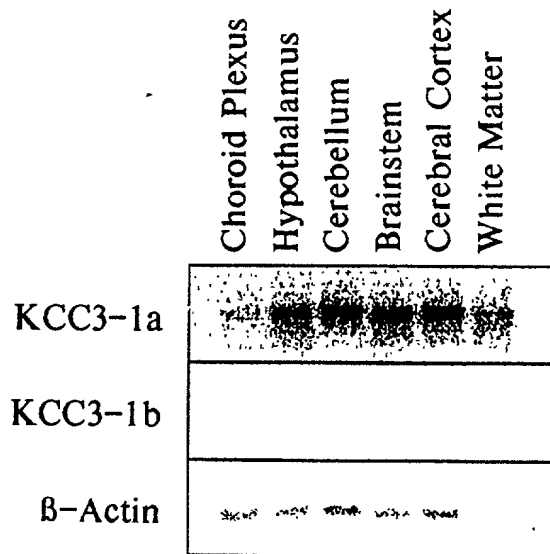


FIG. 29

COPY

FIG. 30A

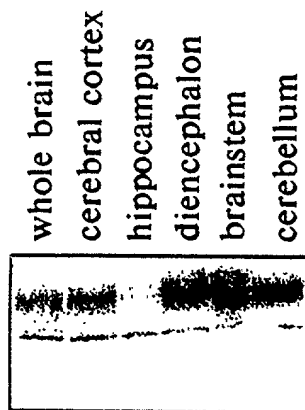


FIG. 30B

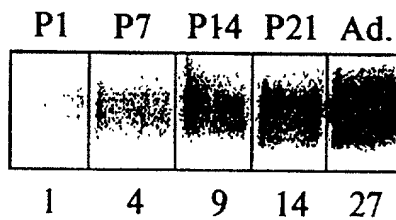
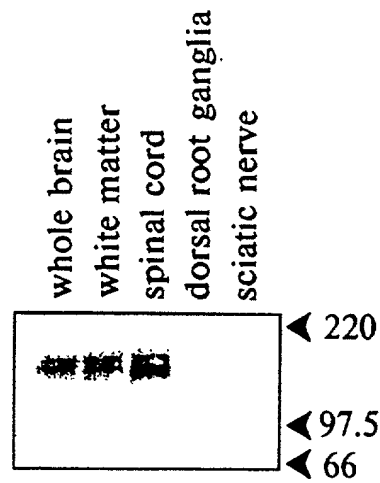


FIG. 30C

204080 9/655360

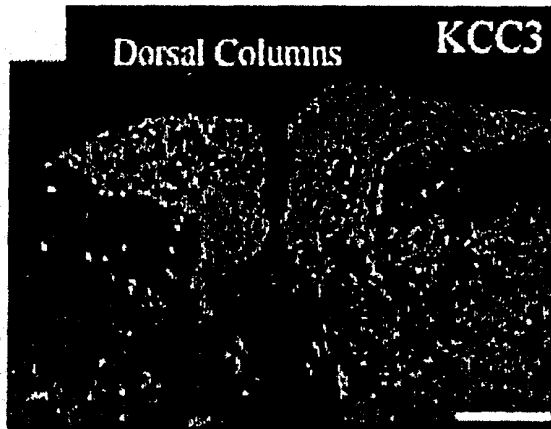


FIG. 31A

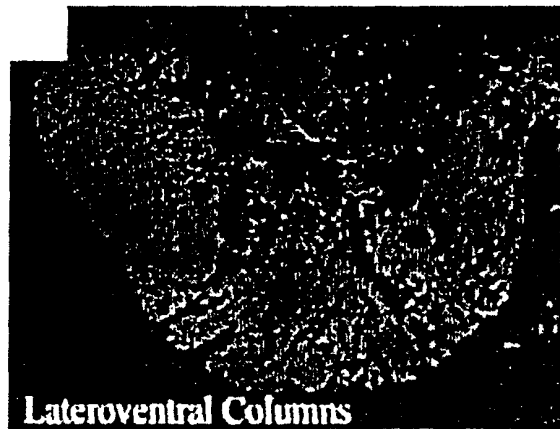


FIG. 31D

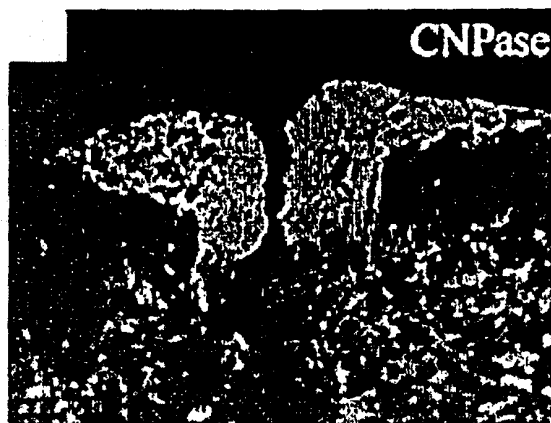


FIG. 31B

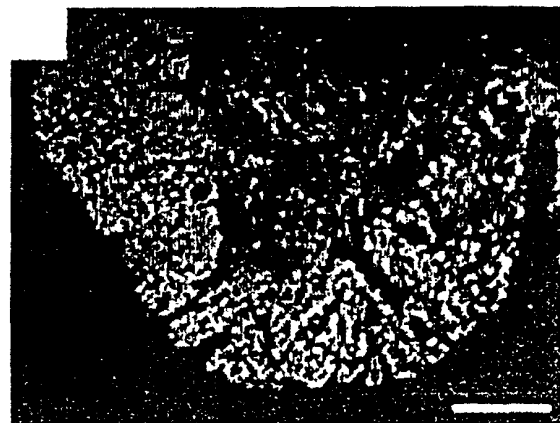


FIG. 31E

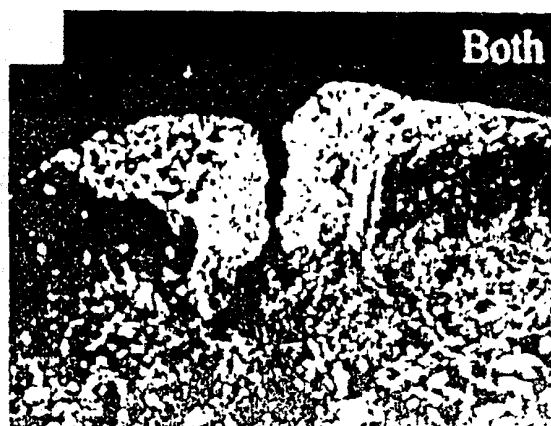


FIG. 31C

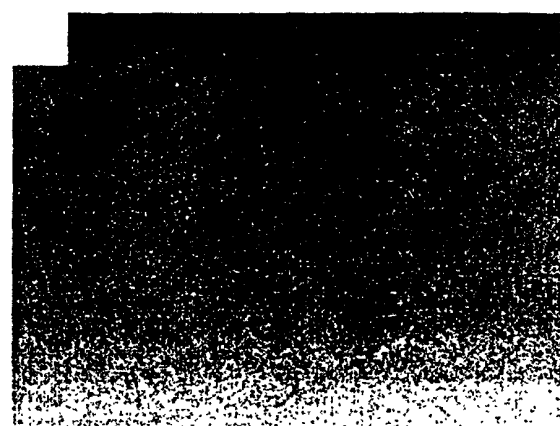


FIG. 31F

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COPY

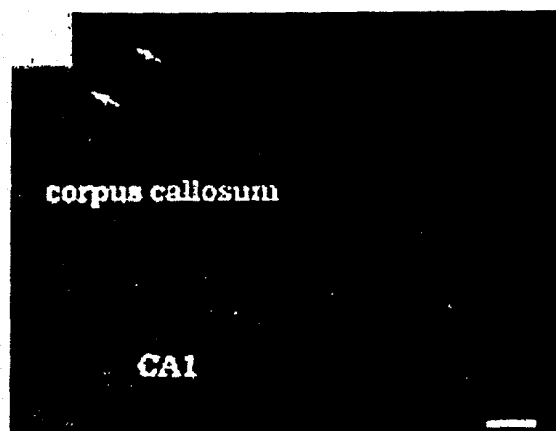


FIG. 32A

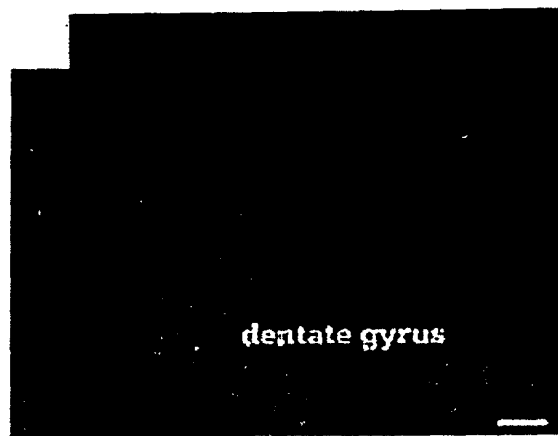


FIG. 32D

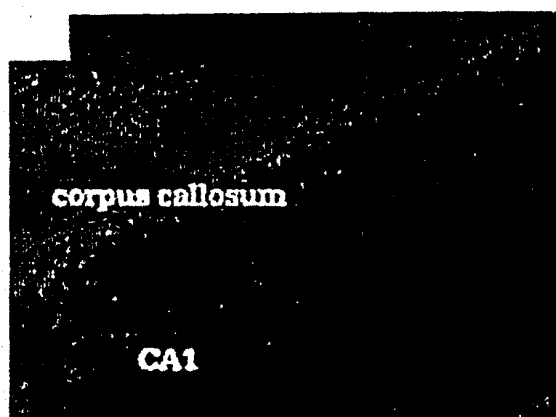


FIG. 32B



FIG. 32E

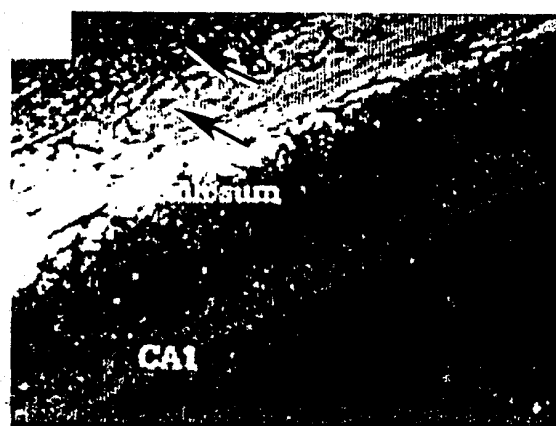


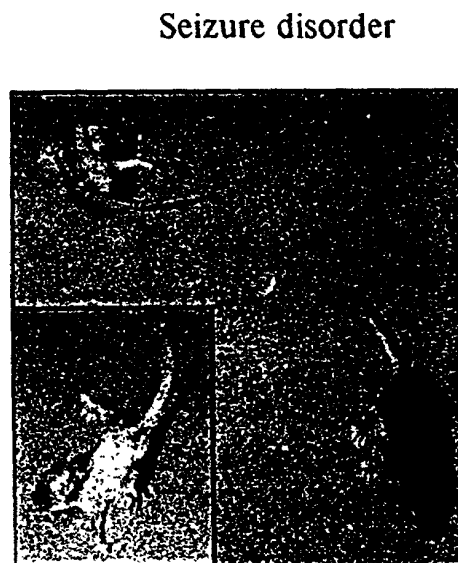
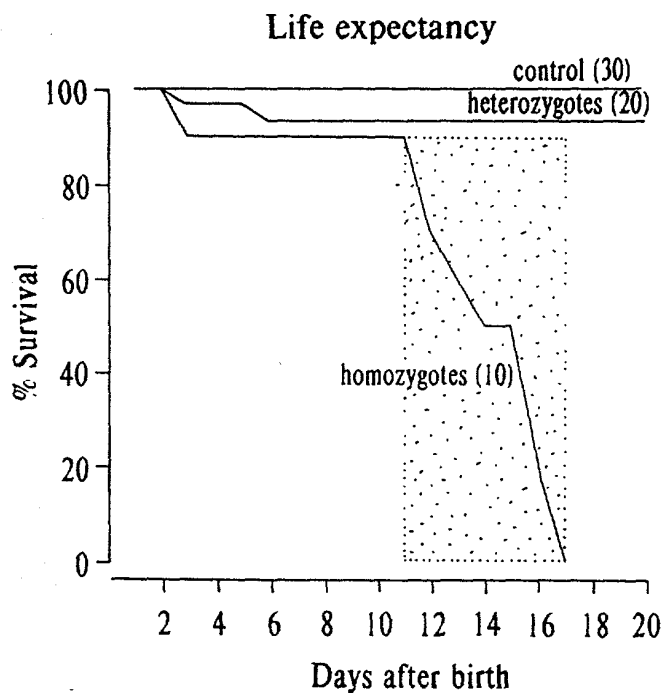
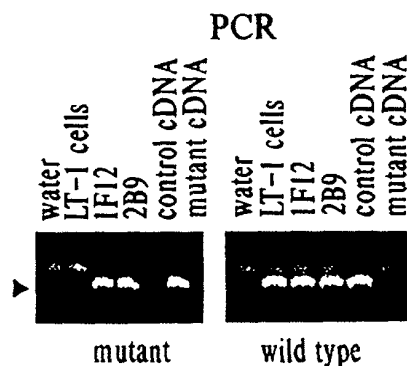
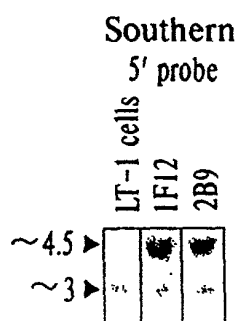
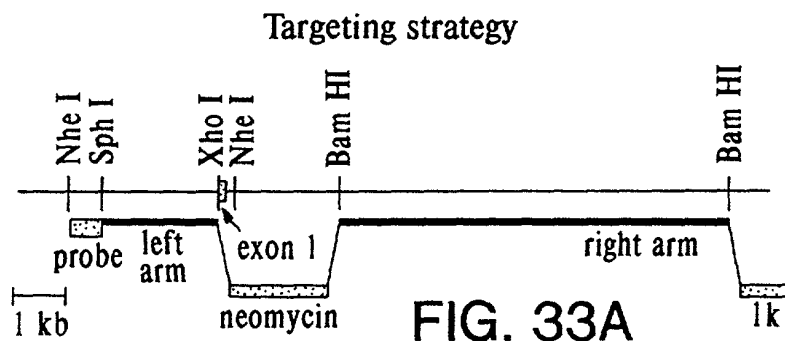
FIG. 32C



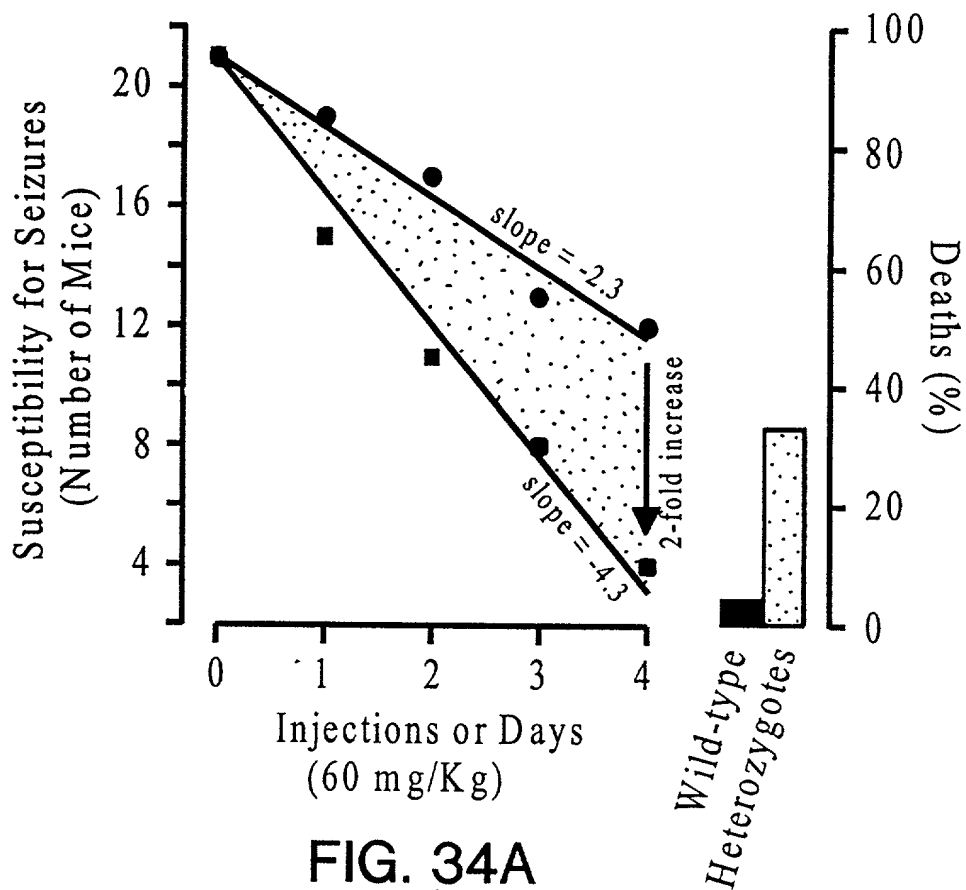
FIG. 32F

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COPY



COPY



COPY

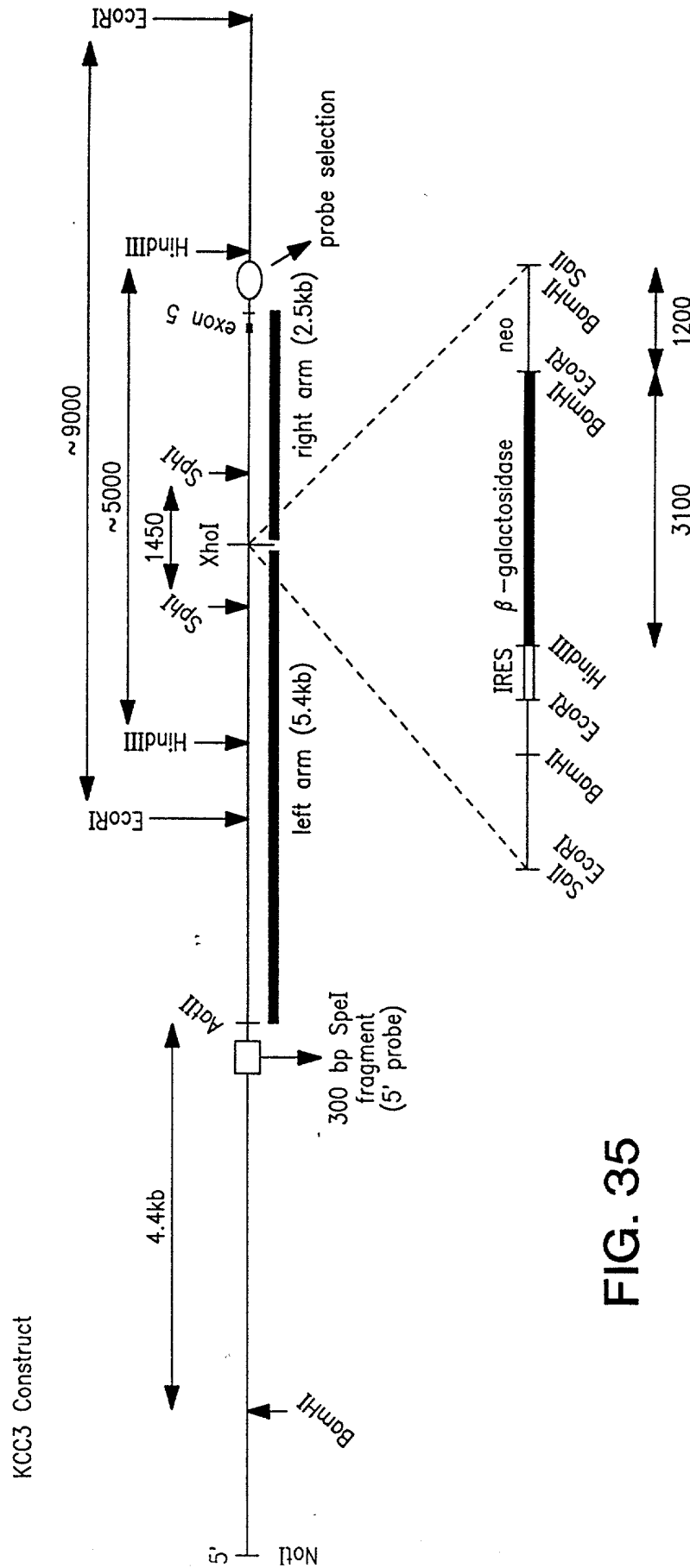


FIG. 35

COPY

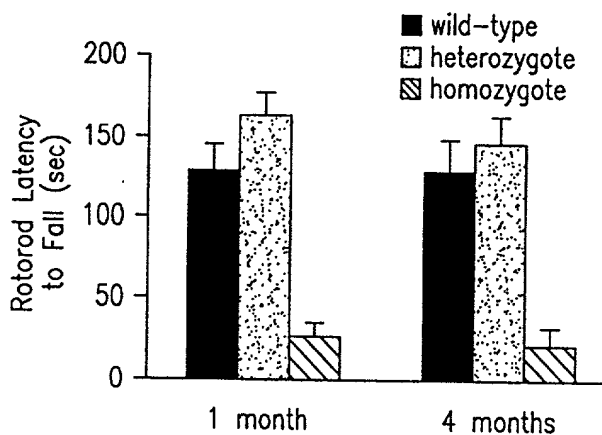


FIG. 36A

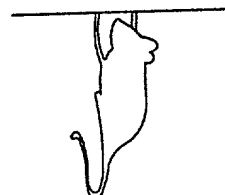
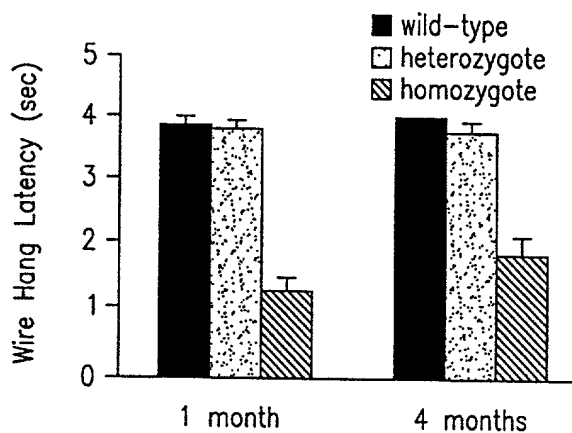


FIG. 36B

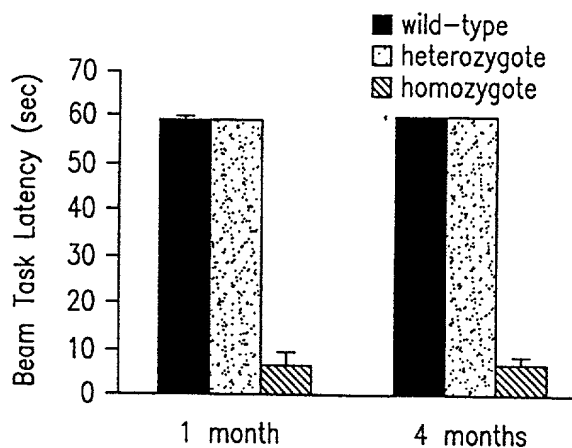


FIG. 36C

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COPY

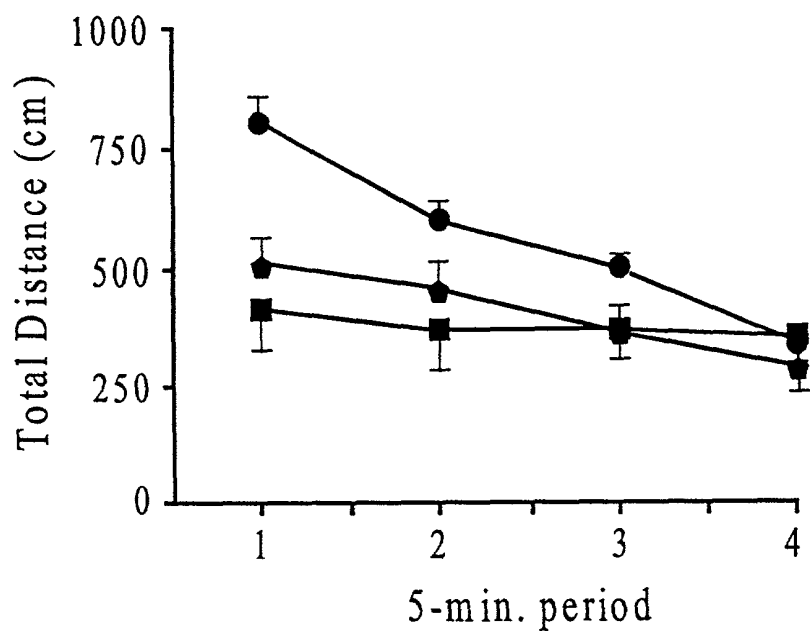


FIG. 37A

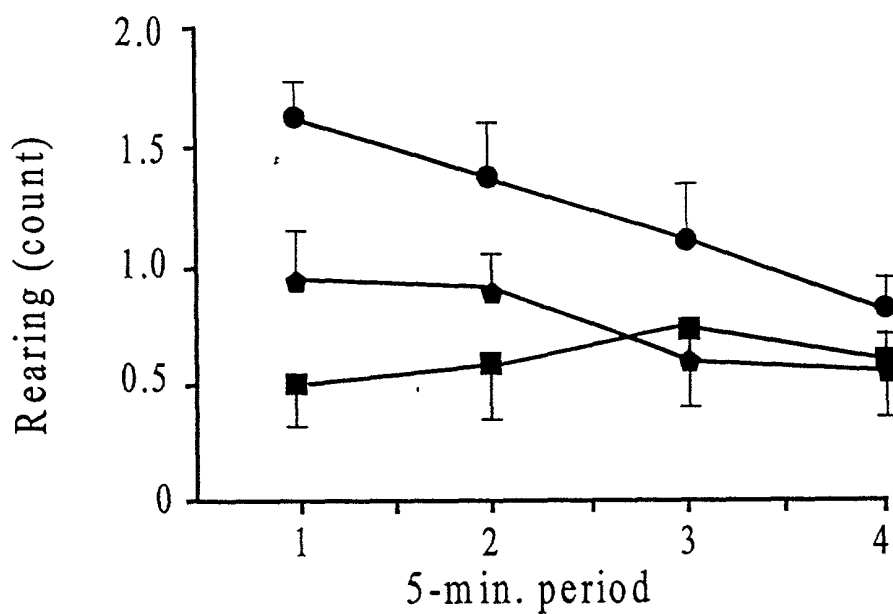


FIG. 37B

COPY

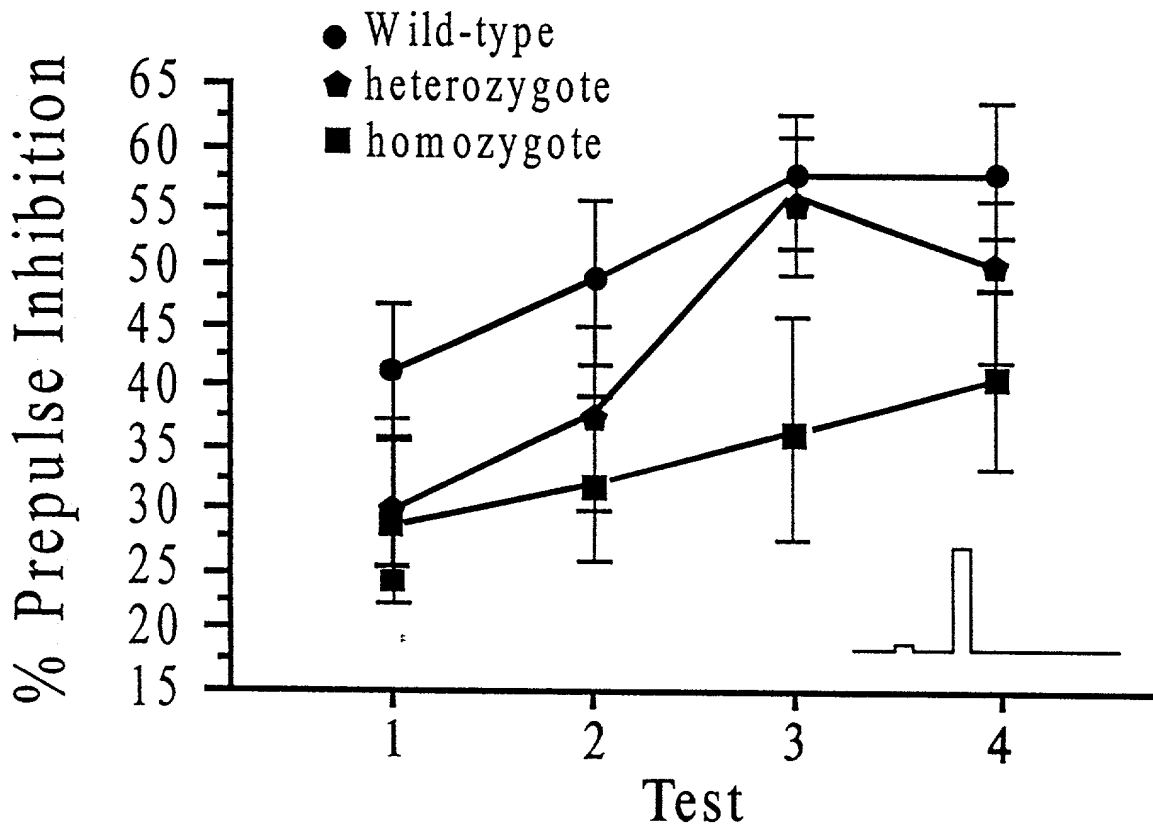


FIG. 38

Title: Purified and Isolated Potassium-Chloride Cotransporter
Nucleic Acids and Polypeptides and Therapeutic and
Screening Methods Using Same

Applicant(s): Mount et al.
Serial No.: 09/835,976

COPY

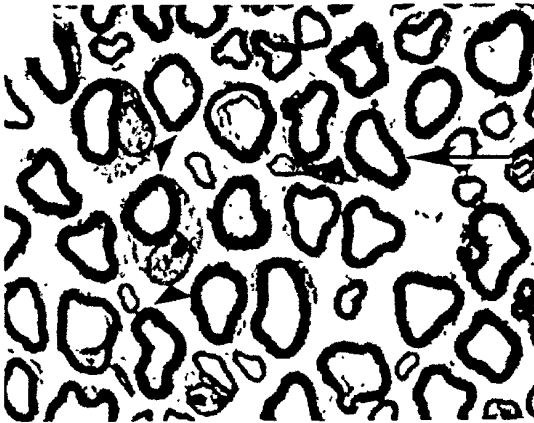


FIG. 39A

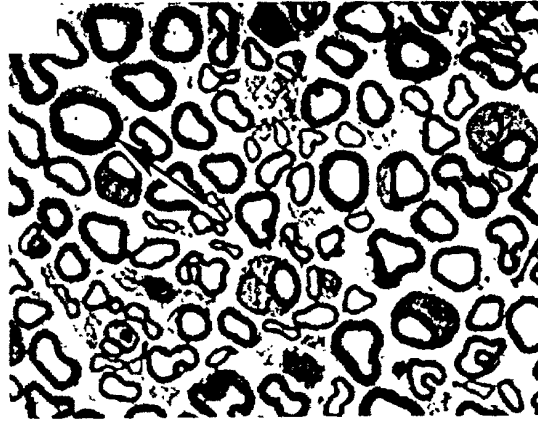


FIG. 39B



FIG. 39C



FIG. 39D

09835976-030402

COPY

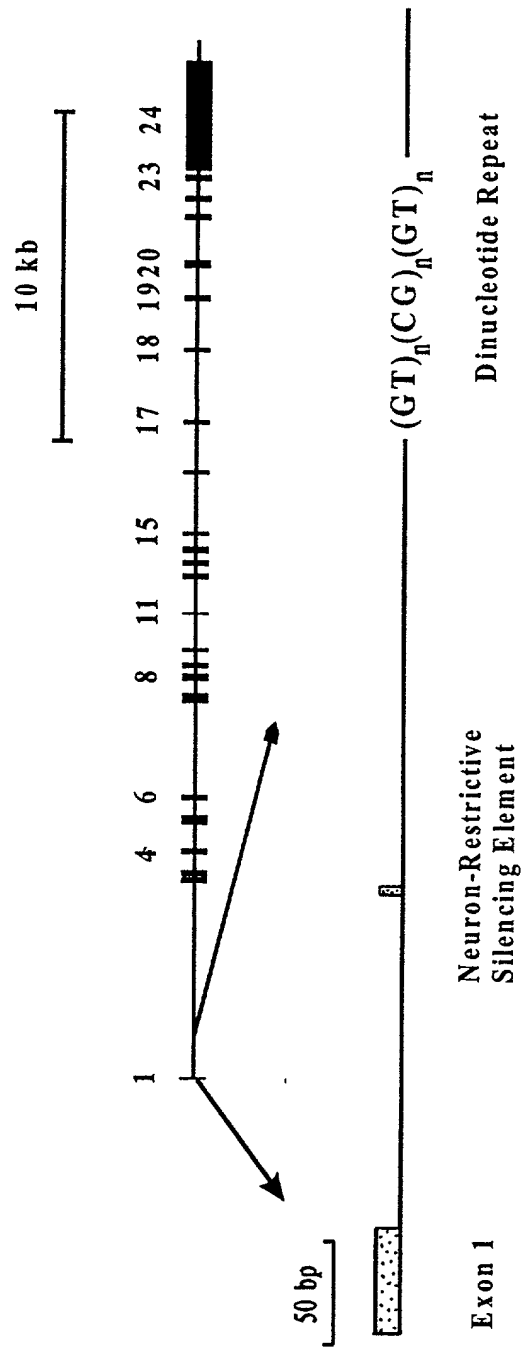


FIG. 40

COPY

Sequence of the hKCC2 dinucleotide repeat in several individuals:

Sample 1:

Allele A (GT)₁₈ (GC)₇ (AT)₁ (GT)₄ (GC)₁ (GT)₁₁ / Total = 84

Allele B (GT)₁₆ (GC)₅ (AT)₁ (GT)₅ (GC)₁ (GT)₉ / Total = 74

Sample 2:

Allele A (GT)₁₈ (GC)₄ (AT)₂ (GT)₄ (GC)₂ (GT)₁₁ / Total = 82

Sample 3:

Allele A (GT)₁₆ (GC)₆ (AT)₁ (GT)₄ (GC)₁ (GT)₁₁ / Total = 78

Allele B (GT)₁₄ (GC)₅ (AT)₁ (GT)₄ (GC)₁ (GT)₁₁ / Total = 72

Sample 4:

Allele A (GT)₁₉ (GC)₆ (AT)₂ (GT)₄ (GC)₂ (GT)₁₀ / Total = 86

Allele B (GT)₁₇ (GC)₇ (AT)₂ (GT)₄ (GC)₂ (GT)₁₀ / Total = 84

Sample 5:

Allele A (GT)₁₇ (GC)₆ (AT)₂ (GT)₄ (GC)₁ (GT)₁₀ / Total = 80

Allele B (GT)₁₆ (GC)₆ (AT)₂ (GT)₃ (GC)₂ (GT)₁₀ / Total = 78

Sample 6:

Allele A (GT)₁₅ (GC)₆ (AT)₁ (GT)₄ (GC)₁ (GT)₁₁ / Total = 76

Allele B (GT)₁₆ (GC)₅ (GT)₁ (AT)₁ (GT)₄ (GC)₁ (GT)₁₁ / Total = 78

Sample 7:

Allele A (GT)₁₆ (GC)₄ (GT)₁ (AT)₁ (GT)₅ (GC)₁ (GT)₁₀ / Total = 76

FIG. 41